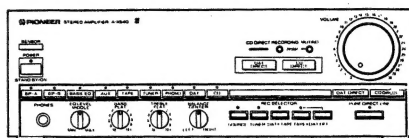


Service Manual

PIONEER
The future of sound and vision.



ORDER NO.
ARP1577

STEREO AMPLIFIER

A-X540

A-X440

A-X340

MODELS A-X540, A-X440 AND A-X340 HAVE FOUR VERSIONS:

Type	Applicable model			Power requirement	Export destination
	A-X540	A-X440	A-X340		
HE	○	○	○	AC220V, 240V (switchable)	European continent
HB	○	○	○	AC220V, 240V (switchable)	United Kingdom
HEZ	○	○	○	AC220V, 240V (switchable)	West Germany
SD	○	○	—	AC110V, 120V-127V, 220V, 240V (switchable)	Kingdom of Saudi Arabia and general market

- This service manual is applicable to the HE and HB types.
- For the HB type, refer to page 48.
- For the other types, refer to additional service manual.

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1. PACKING	2	5. FOR HB TYPE	48
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3. SCHEMATIC DIAGRAM AND P.C. BOARDS CONNECTION DIAGRAM ...	7	7. SPECIFICATION	53
4. ELECTRICAL PARTS LIST	40		

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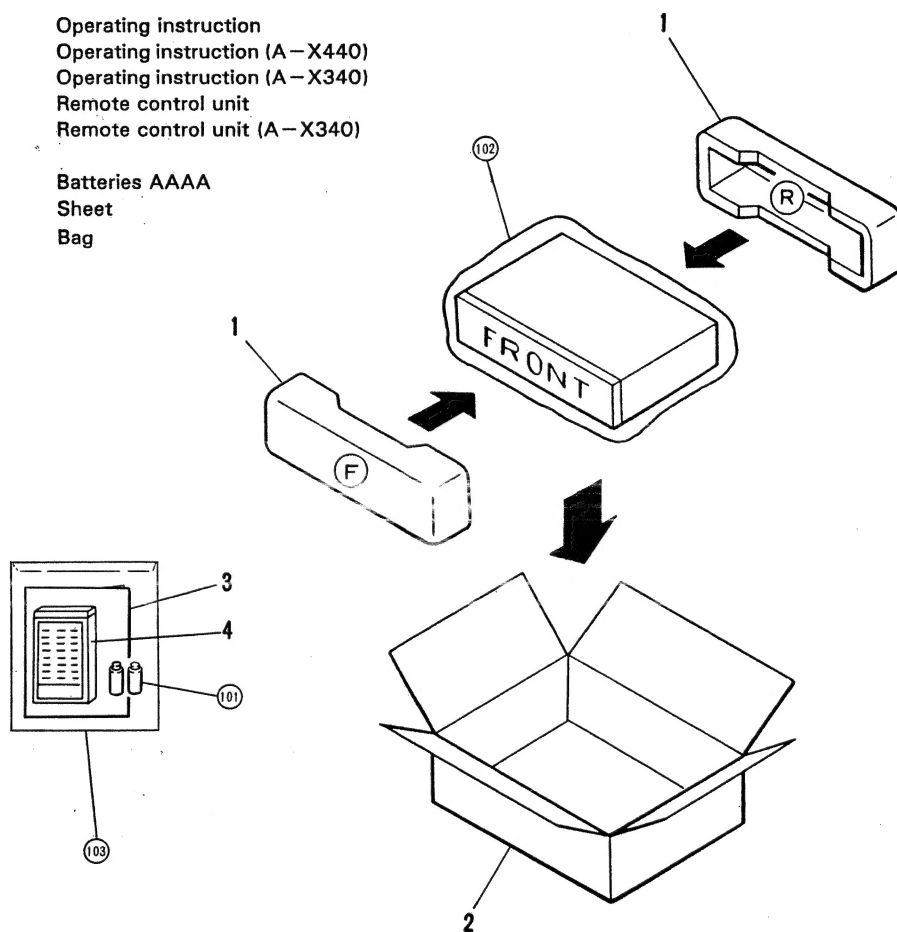
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PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

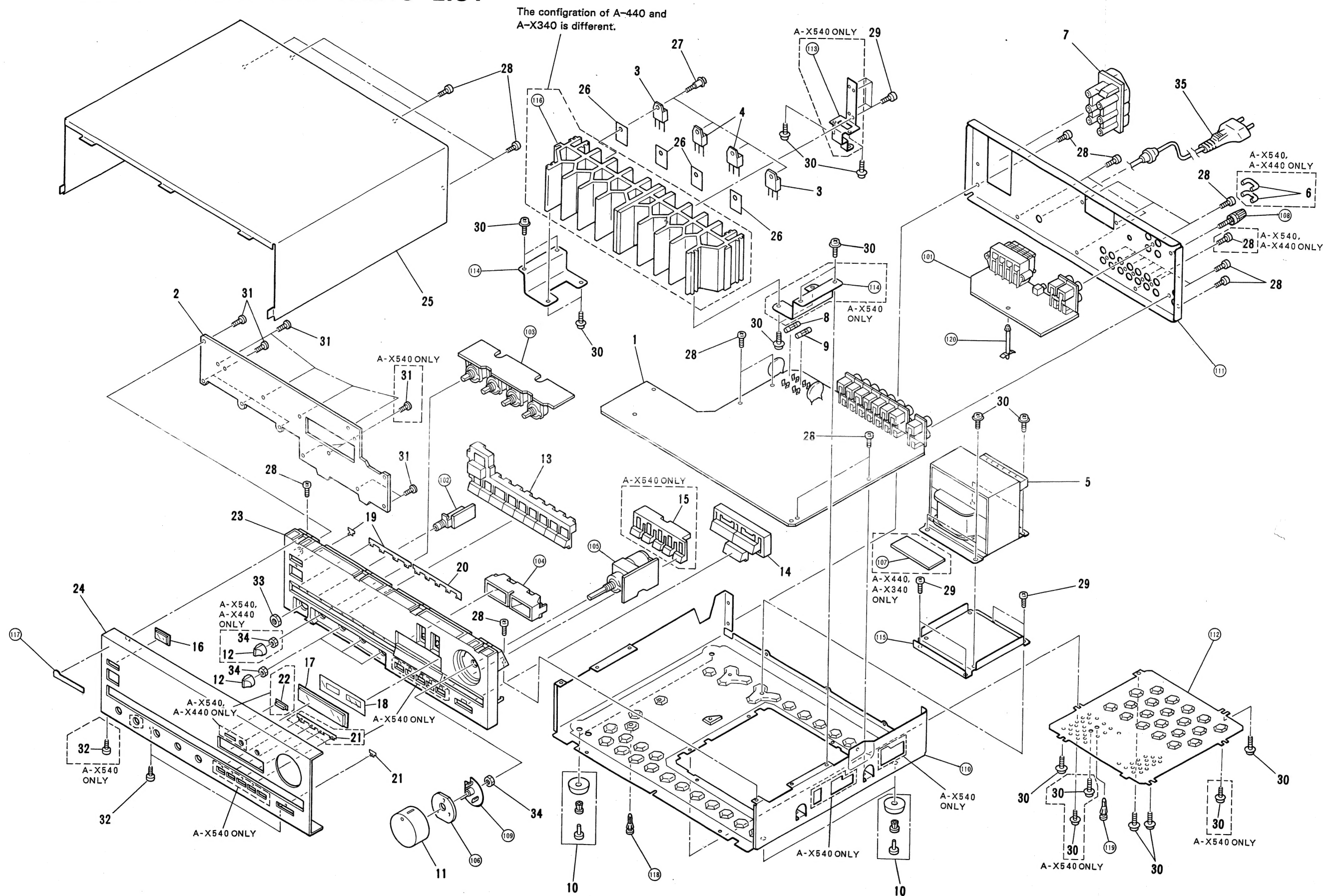
YA © MAY. 1988 Printed in Japan

1. PACKING

Mark	No.	Parts No.	Description
	1	AHA1069	Pad
	2	AHD1414	Packing case
		AHD1415	Packing case (A-X440)
		AHD1416	Packing case (A-X340)
	3	ARE1080	Operating instruction
		ARE1081	Operating instruction (A-X440)
		ARE1082	Operating instruction (A-X340)
	4	AXD1053	Remote control unit
		AXD1052	Remote control unit (A-X340)
101			Batteries AAAA
102			Sheet
103			Bag



2. EXPLODED VIEWS AND PARTS LIST



NOTES:

- Parts with
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Parts List

Mark	No.
------	-----

1

2

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★★

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7
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13

NOTES:

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your parts Stock Control, the fast moving items are indicated with the marks $\star\star$ and \star .
- $\star\star$ **GENERALLY MOVES FASTER THAN \star**
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

Mark	No.	Parts No.	Description	Mark	No.	Parts No.	Description
	1	AWZ1770	AF main assembly		14	AAD1384	Direct knob (DAT DIRECT, CD DIRECT, PURE DIRECT LINE)
		AWZ1777	AF main assembly (A-X440)			AAD1385	Direct knob (A-X340)
		AWZ1781	AF main assembly (A-X340)		15	AAD1386	REC SELECTOR knob (SOURCE, TUNER, DAT ▶ TAPE, TAPE ▶ DAT, OFF)
	2	AWZ1772	Control main assembly		16	AAK1333	Sencer acrylic lens
		AWZ1779	Control main assembly (A-X440)		17	AAK1473	Lamp panel
		AWZ1782	Control main assembly (A-X340)			AAK1474	Lamp panel (A-X340)
$\star\star$	3	2SA1302	Transistor (Q3,Q4)		18	AAK1475	Display seat
		2SA1264N	Transistor (Q3,Q4) (A-X440)			AAK1476	Display seat (A-X340)
		2SA1263N	Transistor (Q3,Q4) (A-X340)		19	AAK1482	Indicator lens L
$\star\star$	4	2SC3281	Transistor (Q1,Q2)			AAK1483	Indicator lens L (A-X340)
		2SC3181N	Transistor (Q1,Q2) (A-X440)		20	AAK1484	Indicator lens R
		2SC3180N	Transistor (Q1,Q2) (A-X340)		21	AAK1485	Indicator lens A
Δ \star	5	ATS1141	Power transformer (220V/240V,T1)			AAK1486	Indicator lens A (A-X440, A-X340)
		ATS1142	Power transformer (220V/240V,T1) (A-X440)		22	AAK1487	DIRECT REC lens
		ATS1143	Power transformer (220V/240V,T1) (A-X340)		23	AMB1397	Panel base
	6	AKM1019	Jumper plug			AMB1398	Panel base (A-X440)
		AKM1004	Jumper plug (A-X440, A-X340)			AMB1399	Panel base (A-X340)
Δ $\star\star$	7	AKP-502	AC socket (3P,AC OUTLET)		24	ANB1226	Front panel
Δ $\star\star$	8	AEK-403	Fuse (T2.5A/250V,FU1)			ANB1227	Front panel (A-X440)
Δ $\star\star$	9	AEK-403	Fuse (T2.5A/250V,FU2)			ANB1228	Front panel (A-X340)
		AEK-017	Fuse (T2A/250V, FU2) (A-X440)		25	AZN1802	Bonnet cover
		AEK-018	Fuse (T1.25A/250V, FU2) (A-X340)			AZN1748	Bonnet cover (A-X440, A-X340)
	10	AMR1285	Leg assembly		26	AEE1014	Mica sheet
						AEC-818	Mica sheet (A-X440, A-X340)
	11	AAB1044	Rotary knob (VOLUME)		27	ABA-297	Screw
		AAB1081	Rotary knob (VOLUME) (A-X440)		28	ABA-298	Screw
		AAB1082	Rotary knob (VOLUME) (A-X340)		29	ABA1009	Screw
	12	AAB1070	Rotary knob (BASS EQ LEVEL, BASS, TREBLE, BALANCE)		30	ABA1011	Screw
	13	AAD1382	Function knob (STAND-BY/ON, SP-A, SP-B, BASS EQ, AUX, TAPE, TUNER, PHONO, DAT, CD)		31	BBZ26P080FMC	Screw
		AAD1383	Function knob (A-X340)		32	BBZ30P080FZK	Screw
					33	ABN-065	Nut
					34	NK90FUC	Nut
					35	ADG1021	AC power cord

Mark	No.	Parts No.	Description
	101		SP assembly
	102		HEADPHONE assembly
	103		TONE assembly
	104		LAMP assembly
	105		VR assembly
	106		LED assembly
	107		CONNECTOR assembly
	108		Terminal (GND)
	109		VOL PCB holder
	110		Chassis
	111		Rear panel
	112		Bottom plate
	113		Heat sink holder A
	114		Heat sink holder B
	115		Trans holder
	116		Heat sink
	117		Name plate
	118		Spacer
	119		PCB spacer
	120		PCB spacer

Line voltage selection (HE, HB TYPES)

Line voltage can be changed with following steps.

- Descomment the AC power cord.
- Remove the top cover.
- Change the connection wire (To Power transformer) of Terminal No. 3 (White) as follows.

Voltage	Terminal No. 3	Terminal No. 5
220V	White
240V	White

- Stick the voltage level on the rear panel.

Part No.	Description
AAX-193	220V level
AAX-192	240V level

3. SCHEMATIC DIAGRAM AND P.C.BOARDS CONNECTION DIAGRAM

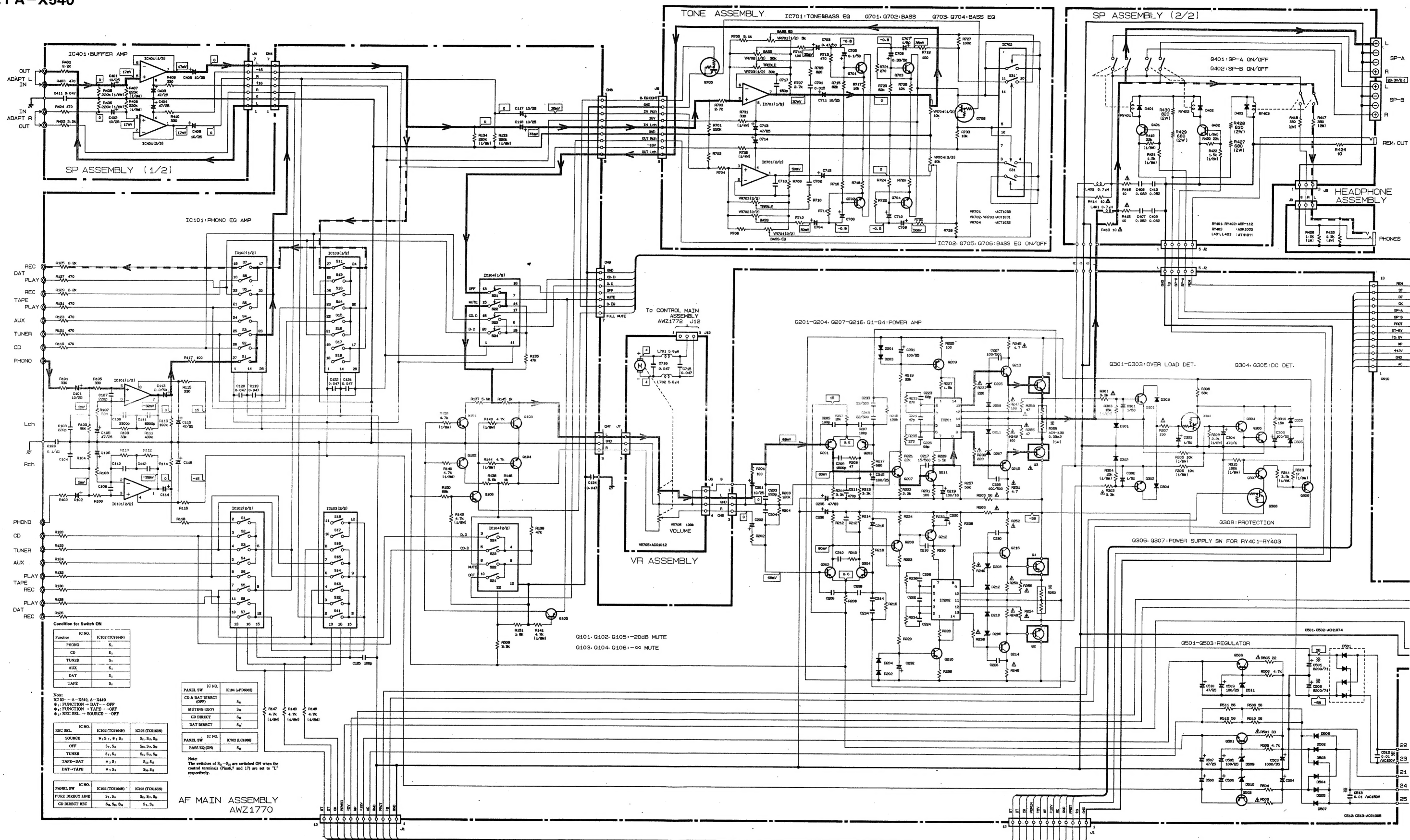
3.1 A-X540

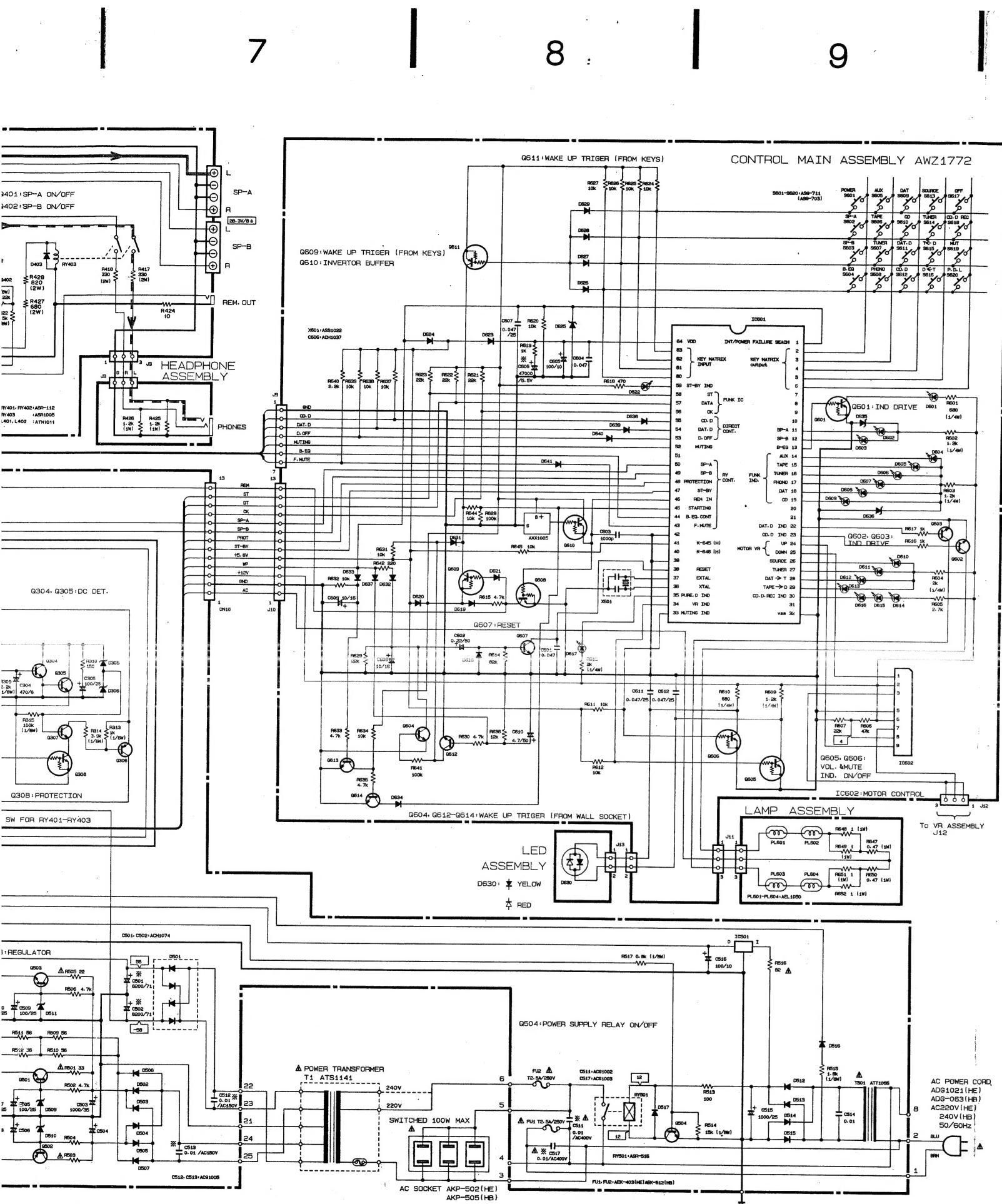
A

B

C

D





AF main assembly (AWZ1770)

Q3,Q4 Transistor 2SA1302
Q1,Q2 Transistor 2SC3281

IC101 M5218P
IC501 M5278L56
IC201,IC202 PA0016
IC103 TC9163N
IC102 TC9164N

IC104 μ PD6362C

Q308 RN1201 (DTC143ES)

Q303 RN2203 (DTA124ES)

Q105,Q106 2SA1048
Q209,Q210 2SA1145
Q215,Q216 2SA968

Q201-Q204 2SA992
Q306,Q502 2SB560
Q207,Q208,Q301,Q302 2SC1845
Q213,Q214 2SC2238
Q307,Q504 2SC2240

Q304,Q305 2SC2458
Q211,Q212 2SC2705
Q101-Q104 2SC2878
Q501 2SD438
Q503 2SD880

D501 D5B820F
D207,D208 HZS5BLL
D205,D206 HZS5CLL
D305 RD13ESB
D511 RD13ESB1

D509,D510 RD16ESB3

D306 RD5.6ESB
D502-D507,D512-D515 S5566 (11E2)
D201-D204,D209-D212, 1SS252
D301-D304,D516,D517

Control main assembly (AWZ1772)

IC601 PDG022
IC602 TA7291S

Q601,Q605,Q608,Q608 RN1201 (DTC143ES)

Q609-Q611 RN2201 (DTA143ES)

Q602,Q603 2SC2235
Q607,Q612-Q614,Q604 2SC2458

D614-D616 AEL1053
D602-D613,D617,D622 AEL1072
D601 AEL1073
D635,D636 RD3.0ESB
D625 RD4.7ESB2

D618-D621,D623,D624, 1SS252
D626-D629,D631-D634, D637-D641

1. RESISTORS:
Indicated in Ω , $\frac{1}{4}W$, $\frac{1}{2}W$, $\pm 5\%$ tolerance unless otherwise noted k: k Ω , M: M Ω , (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$ (M): $\pm 20\%$ tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
 \square : Signal voltage of 100 W+100 W, 8 Ω output (1 kHz)
 \square : DC voltage (V) at no input signal
Value in () is DC voltage at rated power.
 \square mA: DC current at no input signal

4. OTHERS:
 \rightarrow : Signal route.
 \odot : Adjusting point.
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
* marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCH

S601 POWER	S611 DAT.D
S602 SP-A	S612 CD.D
S603 SP-B	S613 SOURCE
S604 B.EQ	S614 TUNER
S605 AUX	S615 D \rightarrow T
S606 TAPE	S616 T \rightarrow D
S607 TUNER	S617 OFF
S608 PHONO	S618 CD.D REC
S609 DAT	S619 MUT
S610 CD	S620 P.D.L

SP assembly

IC401	M5218PF
Q401,Q402	2SC2235
D401-D403	1SS252

TONE assembly

IC702	LC4966
IC701	M5218PF
Q705	RN1201 (DTC143ES)
Q706	RN2201 (DTA143ES)
Q701-Q704	2SC1740SLN

LED assembly

D630 LED	AEL1071
----------	---------

1 2 3 4 5 6

Q610 Q608 Q614 Q613
Q611 Q609
Q601

IC601

Q607 Q612
IC602 Q602 Q603

Q606 Q605

AC POW
AC 220
240
50/60

LED ASSEMBLY

AC SOCKET

SWITCHED 100W MAX

HEADPHONE ASSEMBLY

LAMP ASSEMBLY

VR ASSEMBLY

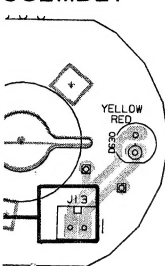
SP ASSEMBLY

TONE ASSEMBLY

AF

1 2 3 4 5 6

SSEMBLY



AC POWER CORD
AC 220V (HE)
240V (HB)
50/60Hz

BRN

BLU

T1 POWER TRANSFORMER

240V

220V

AC SOCKET

SWITCHED 100W MAX

AF MAIN ASSEMBLY (AWZ 1770)

IC201 Q209 Q211

Q207

Q215 Q213

Q203 Q201

IC501 Q501-Q504

Q301 Q302

Q202 Q204

Q214 Q208

Q303-Q308

Q210 Q212

IC202

IC102

Q216

Q101-Q106

IC103

IC101

IC104

NOTE

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504		Transistor
Q215		Resistor type transistor
D203		Diode
R237		Resistor
C513		Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Cell
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with @ (double circles) shows negative terminal.
4. The diode terminal marked with @ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

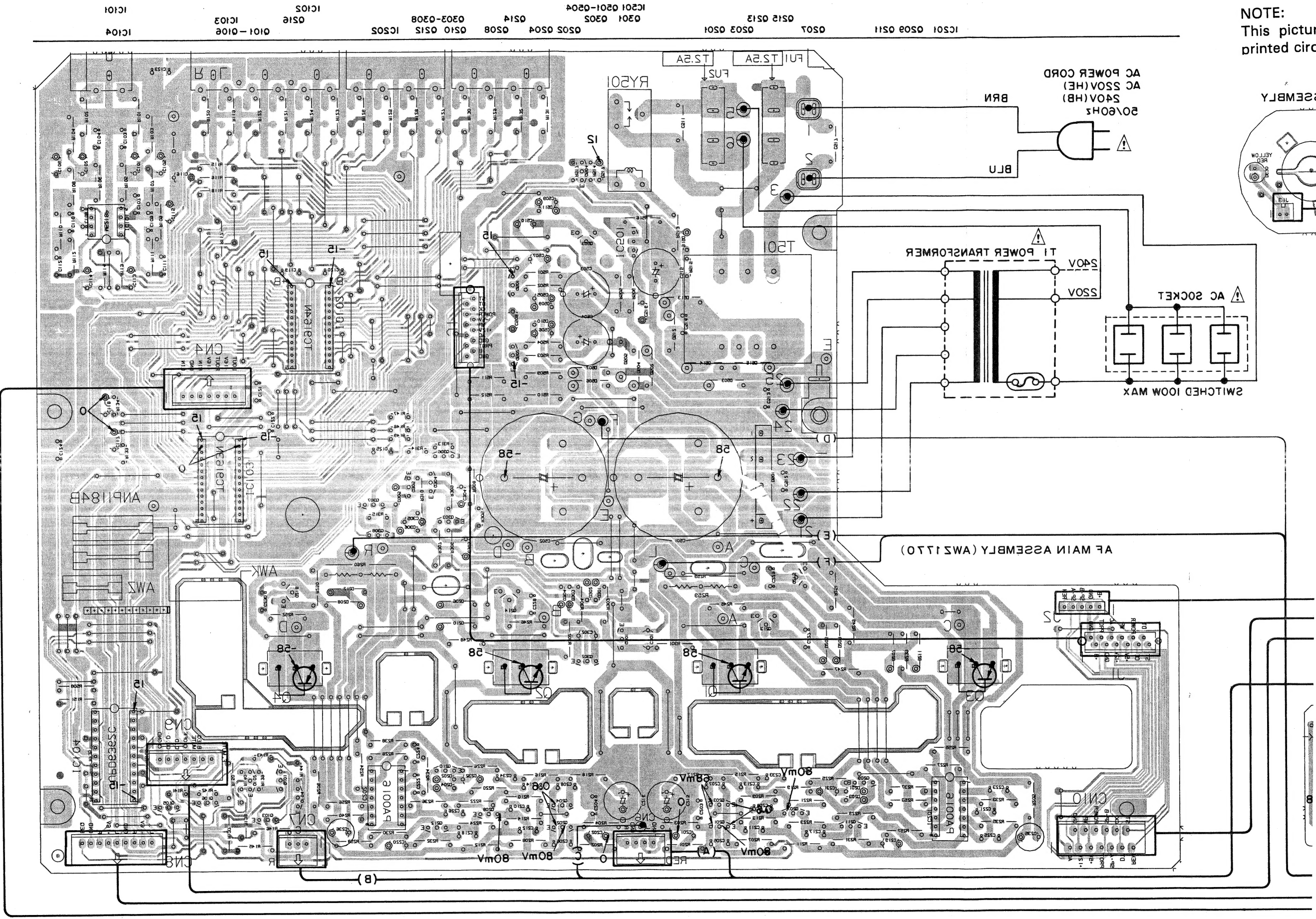
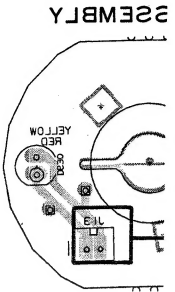
A

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D

NOTE:
This picture
printed circi

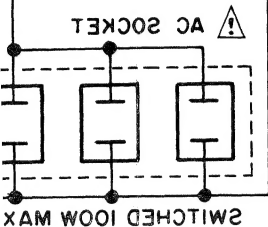


042X-A 15

15 11 10 9 8 7

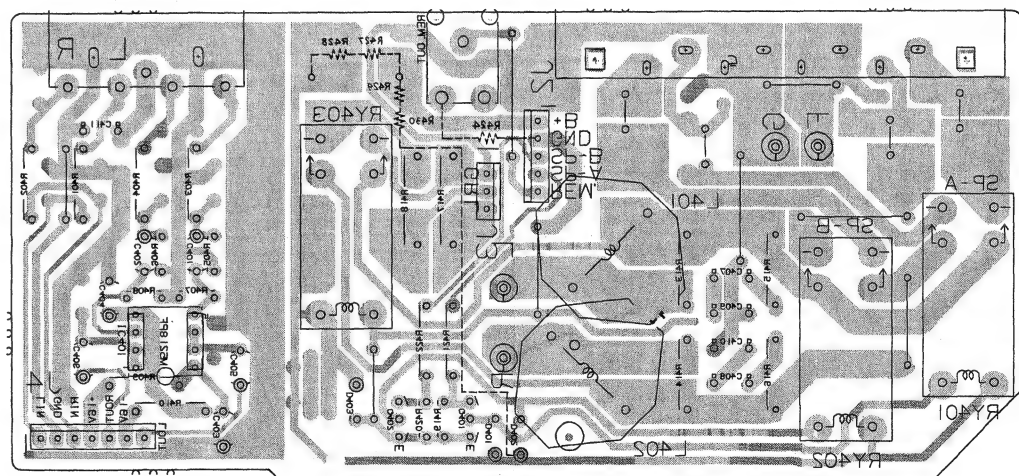
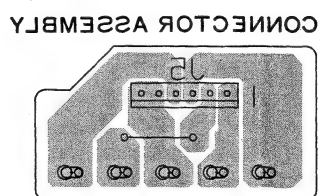
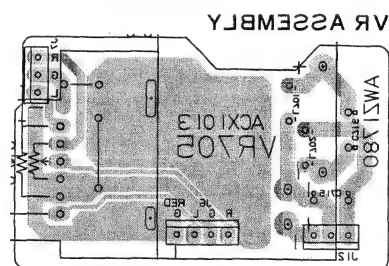
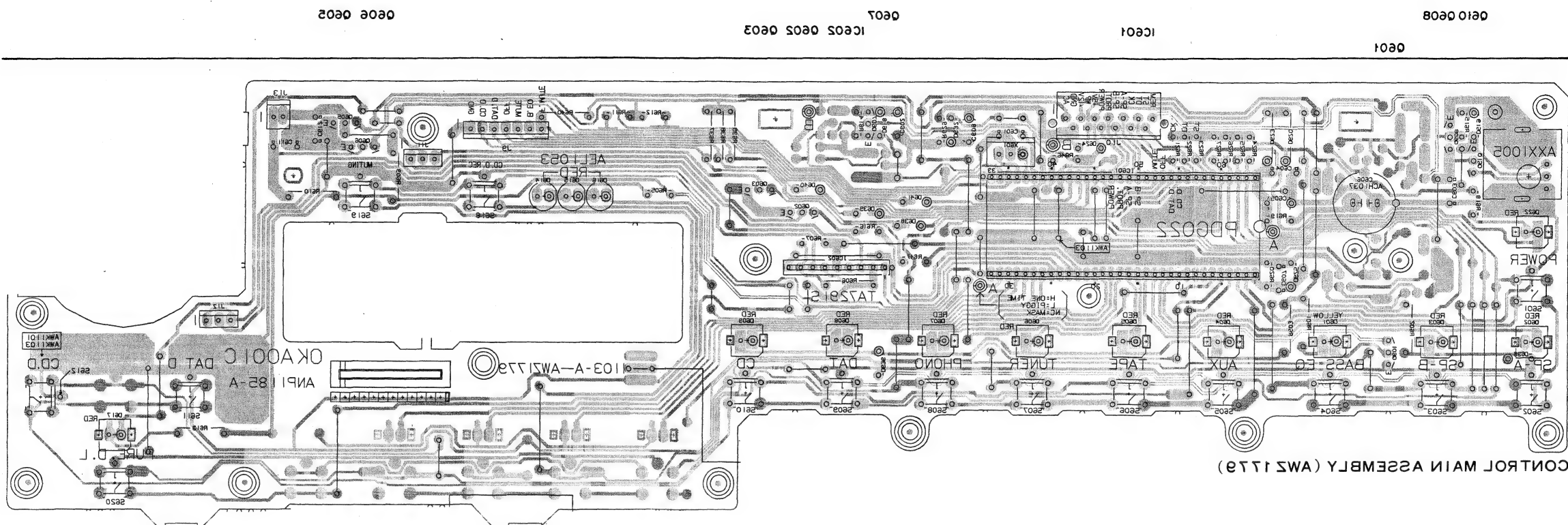
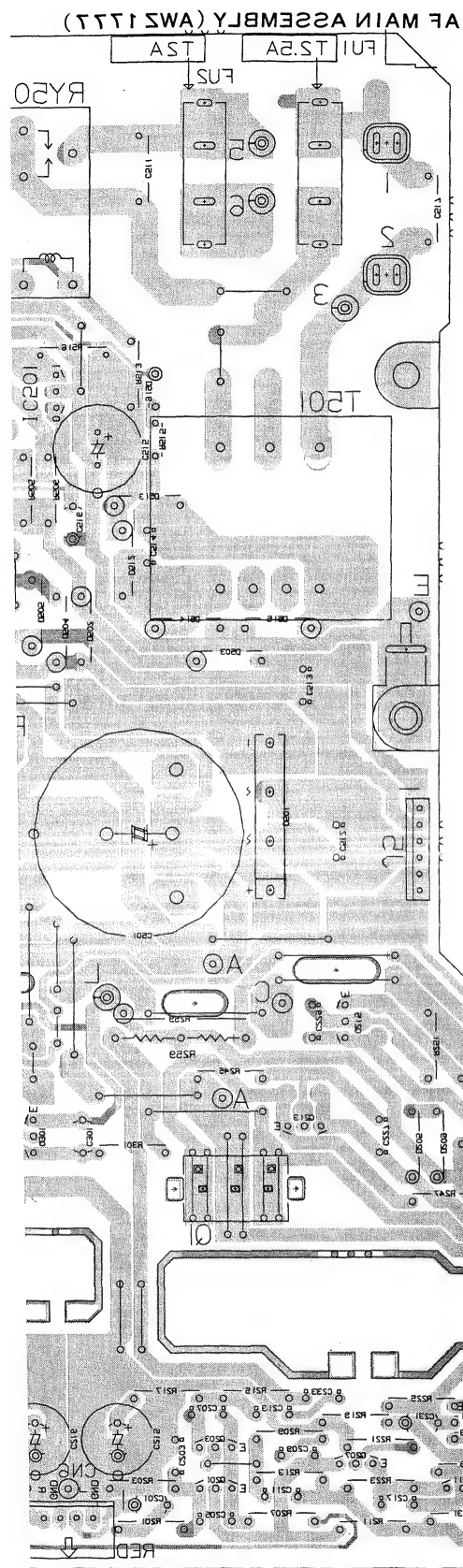
A B C D

02



C

NOTE:
This picture shows the foil side of the printed circuit.



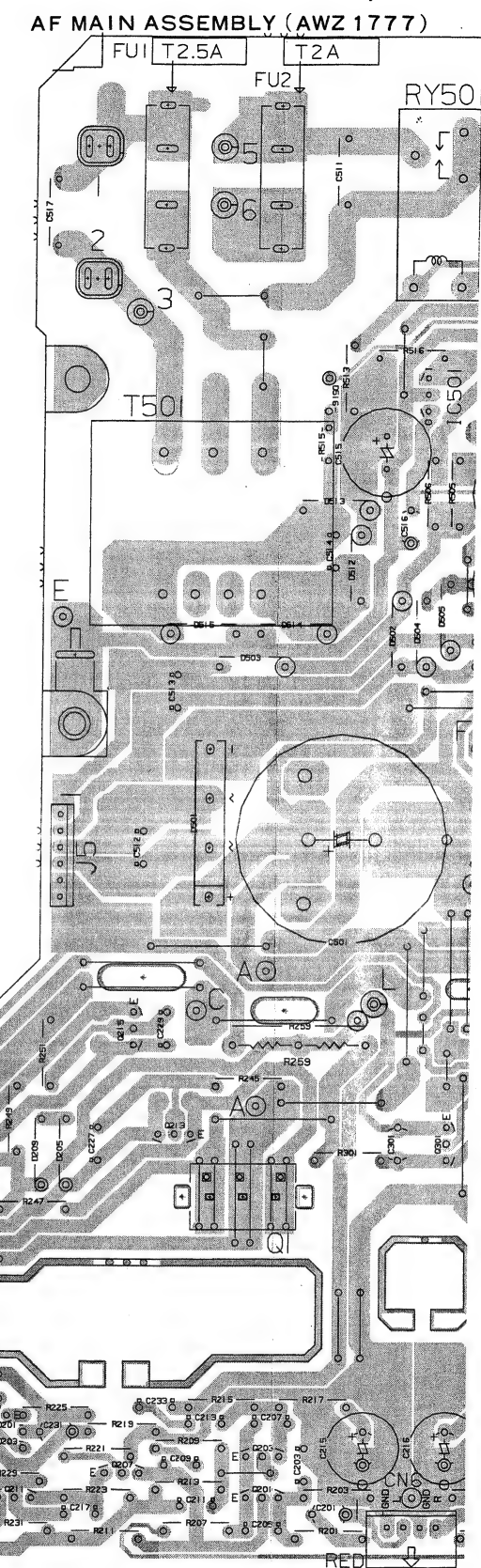
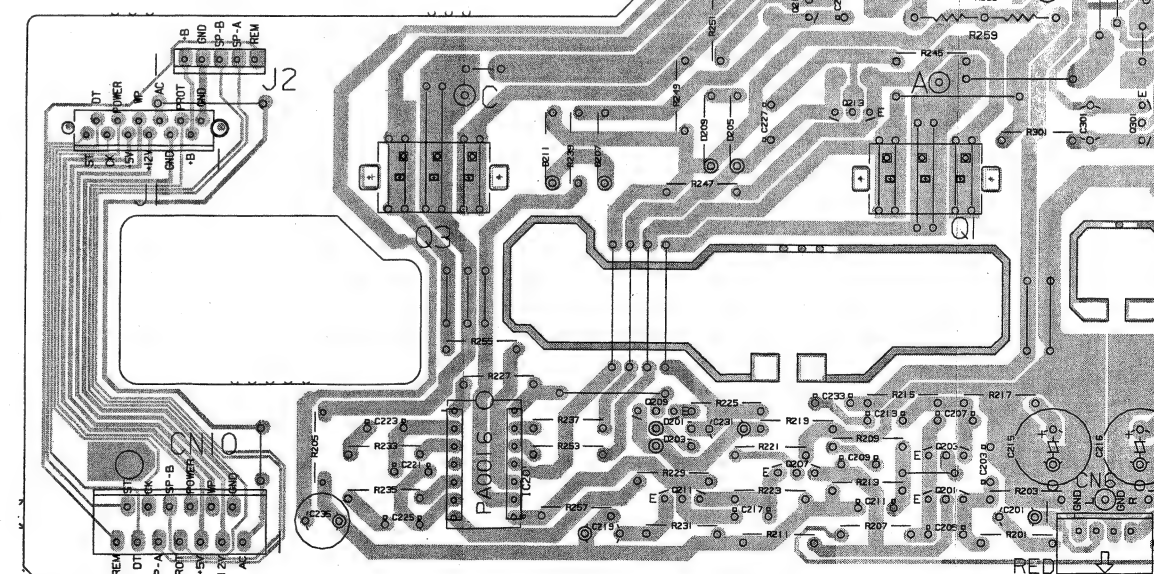
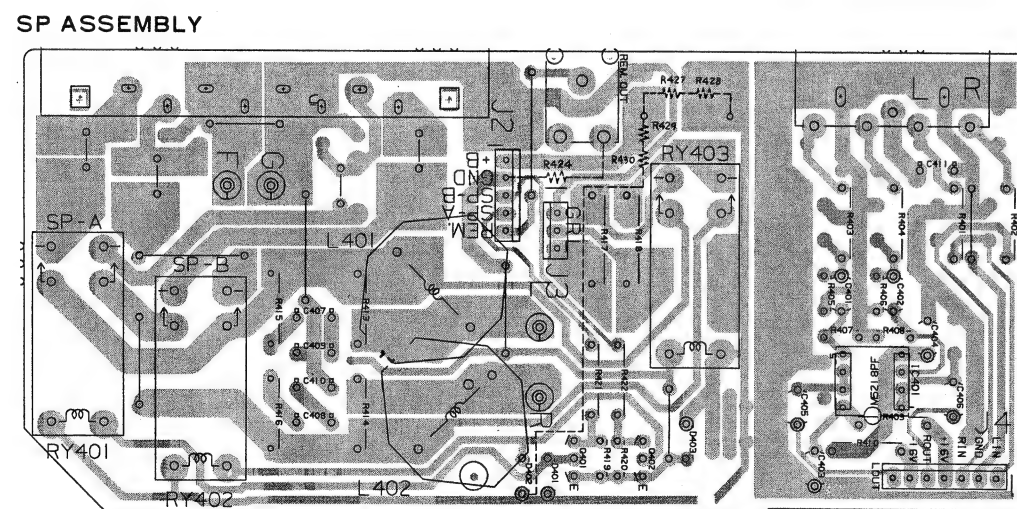
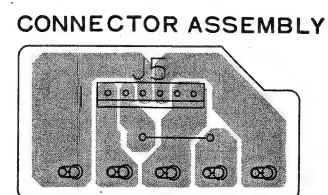
SP ASSEMBLY

CONTROL MAIN ASSEMBLY (AWS 1779)

VR ASSEMBLY

CONNECTOR ASSEMBLY

[illegible]



4

5

6

7

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9

AF MAIN ASSEMBLY (AWZ 1777)

Q606 Q605

A

B

C

D

ASSEMBLY

CONNECTOR ASSEMBLY.

IC201		Q209	Q211	Q207	Q215	Q213	Q203	Q201	Q301	Q302	Q214	Q208	Q210	Q212	IC202	IC102	Q216	IC103	Q101 - Q106	IC101	IC104
								IC501 Q501-Q504													

4

5

6

7

8

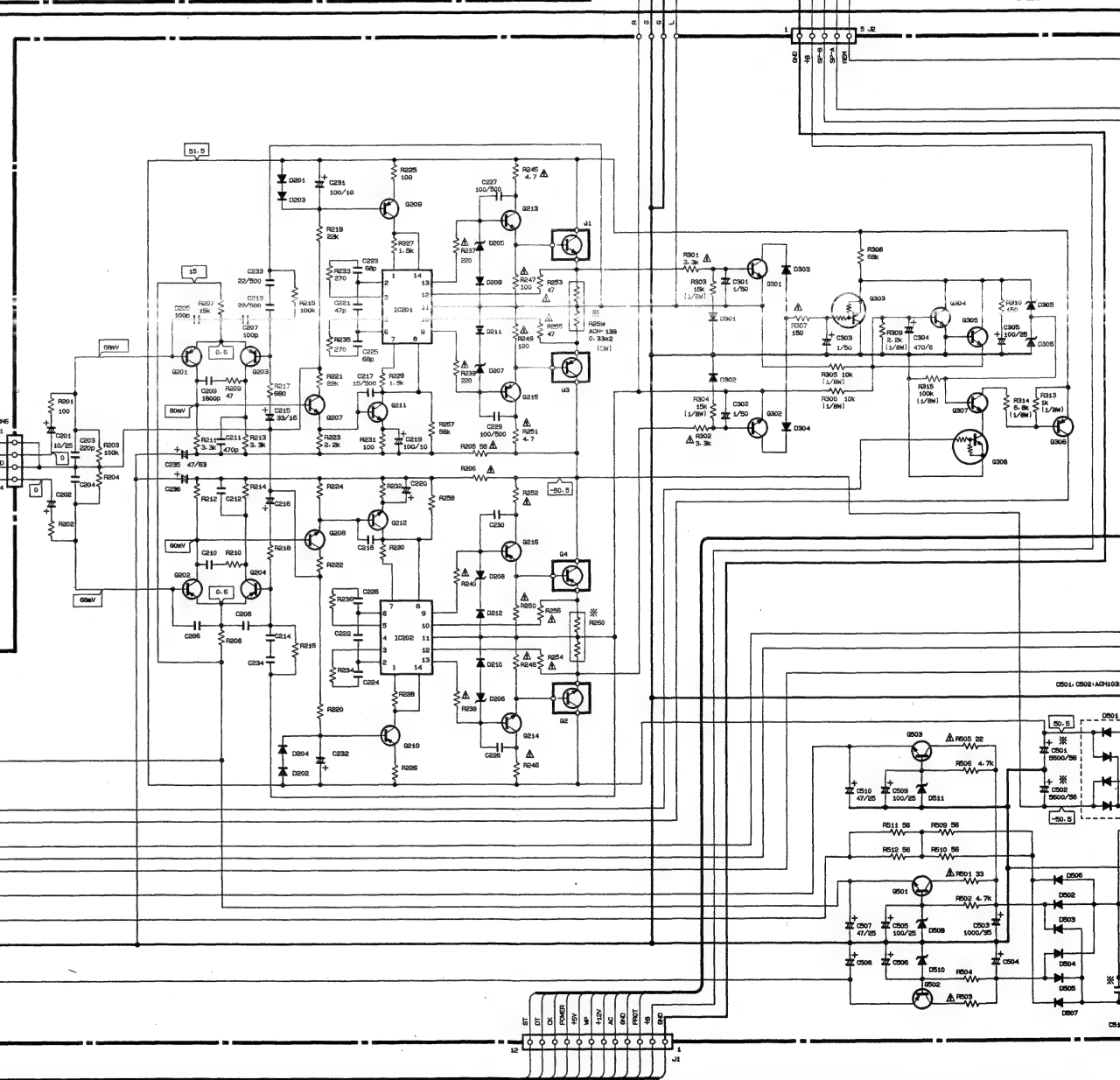
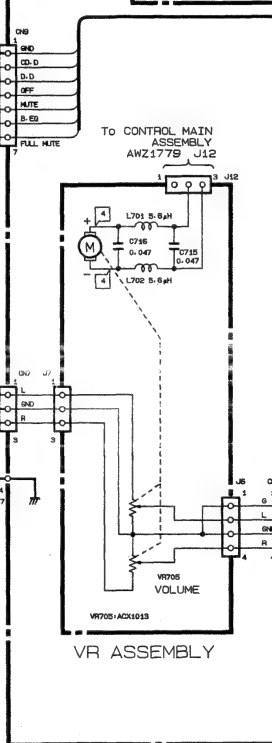
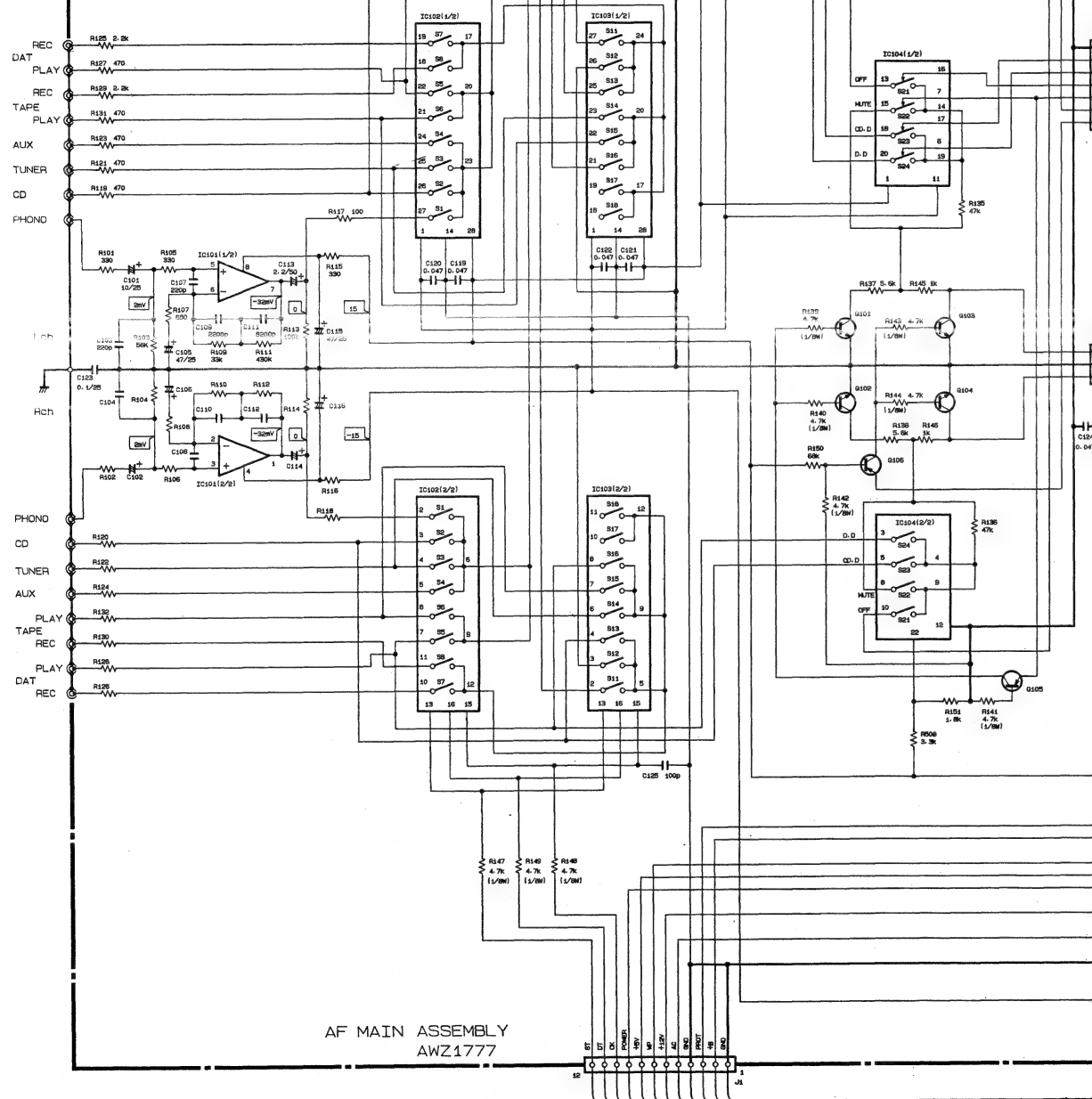
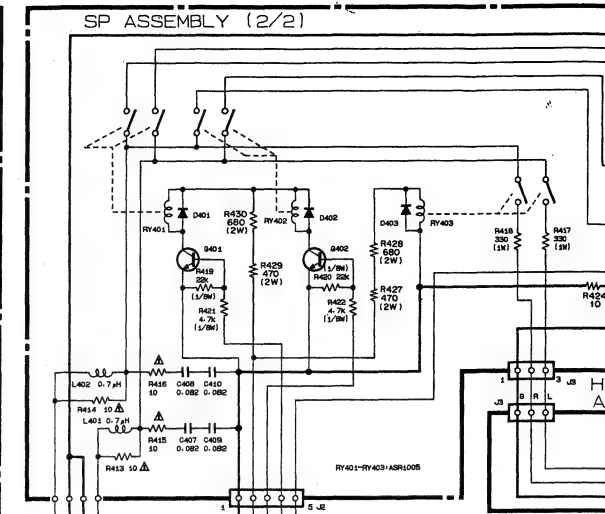
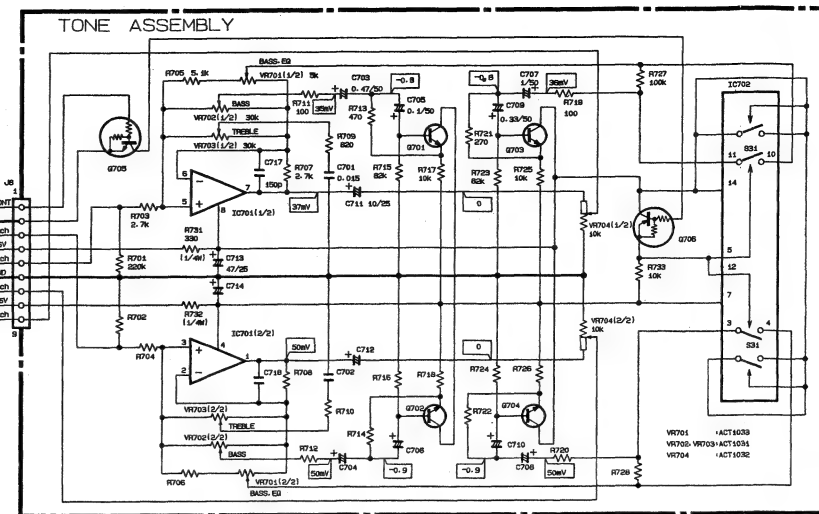
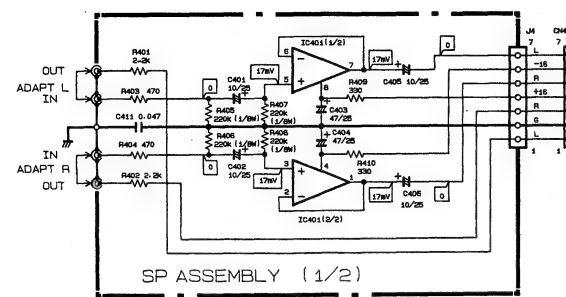
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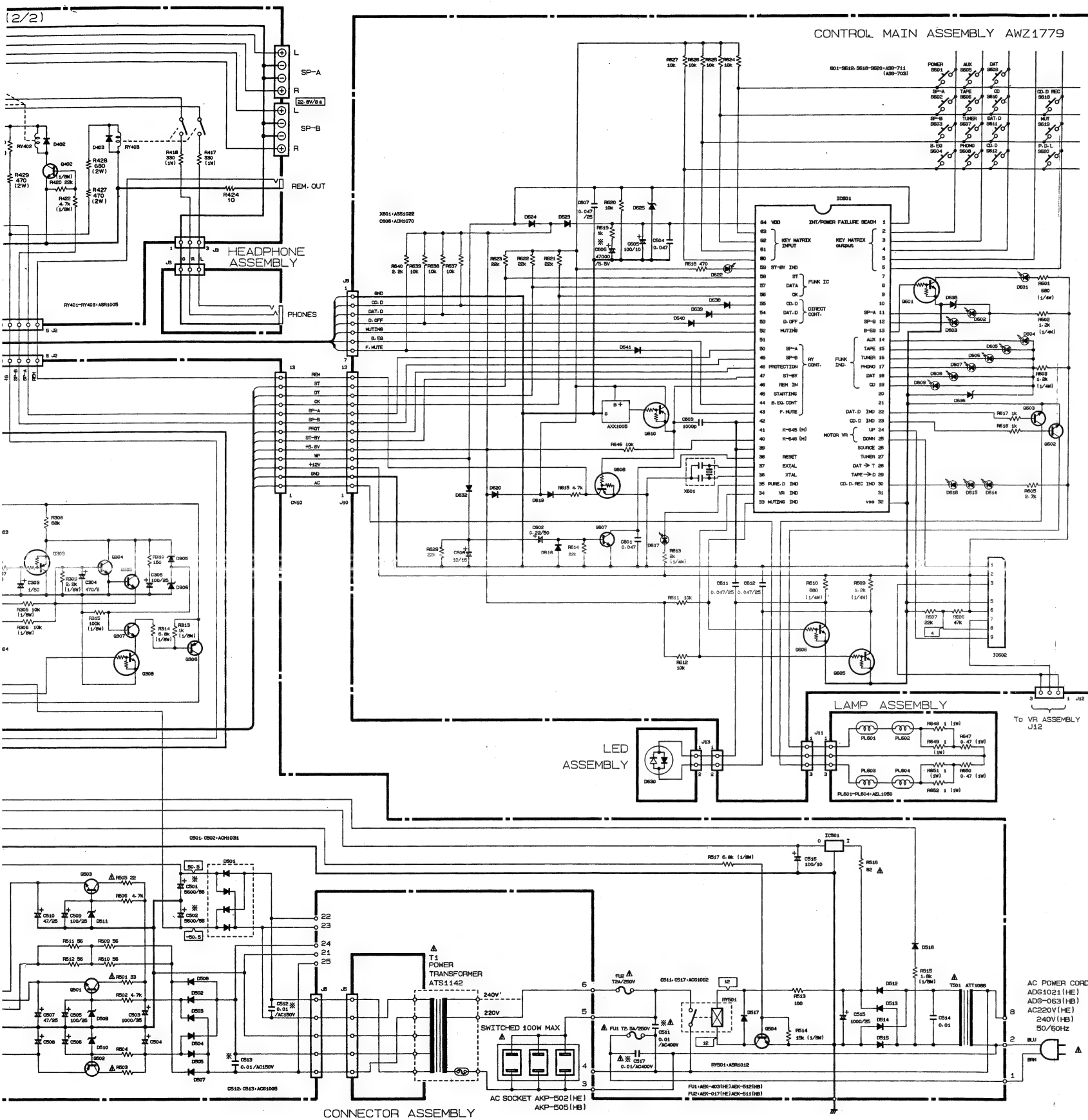
A

B

C

D





AF main assembly (AWZ1777)

Q3,Q4 Transistor	2SA1264N
Q1,Q2 Transistor	2SC3181N
IC101	M5218P
IC501	M5278L56
IC201,IC202	PA0016
IC103	TC9163N
IC102	TC9164N
IC104	μPD6362C
Q308	RN1201 (DTC143ES)
Q303	RN2203 (DTA124ES)
Q105,Q106	2SA1048
Q215,Q216	2SA5 5
Q201-Q204,Q209, Q210	2SA992
Q306,Q502	2SB560
Q213,Q214	2SC2235
Q207,Q208,Q211,Q212,Q301, Q302,Q307,Q504	2SC2240
Q304,Q305	2SC2458
Q101-Q104	2SC2878
Q501	2SD438
Q503	2SD880
D207,D208	HZS4BLL
D205,D206	HZS5BLL
D501	RBV402
D305	RD13ESB
D511	RD13ESB1
D509,D510	RD16ESB3
D306	RD5.6ESB
D502-D507,D512-D515	S5566 (11E2)
D201-D204,D209-D212, D301-D304,D516,D517	1SS252

Control main assembly (AWZ1779)

IC601	PDG022
IC602	TA7291S
Q601,Q605,Q606,Q608	RN1201 (DTC143ES)
Q610	RN2201 (DTA143ES)
Q602,Q603	2SC2235
Q607	2SC2458
D614-D616	AEL1053
D602-D609,D617,D622	AEL1072
D601	AEL1073
D635,D636	RD3.0ESB
D625	RD4.7ESB2
D618-D620,D623,D624,D632, D638-D641	1SS252

1. RESISTORS:
Indicated in Ω, ¼W, ½W, ±5% tolerance unless otherwise noted k: kΩ,
M: MΩ, (F): ±1%, (G): ±2%, (K): ±10% (M): ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:

⎓: Signal voltage at 6.2 W + 6.2 W, 8Ω output (1 kHz)

⎓: DC voltage (V) at no input signal
Value in () is DC voltage at rated power.

⎓ mA: DC current at no input signal

4. OTHERS:

➔: Signal route.

⊗: Adjusting point.

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

* marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCH

S601 POWER	S609 DAT
S602 SP-A	S610 CD
S603 SP-B	S611 DAT.D
S604 B.EQ	S612 CD.D
S605 AUX	S618 CD.D REC
S606 TAPE	S619 MUT
S607 TUNER	S620 P.D.L
S608 PHONO	

SP assembly

IC401	M5218PF
Q401,Q402	2SC2240
D401-D403	1SS252

TONE assembly

IC702	LC4966
IC701	M5218PF
Q705	RN1201 (DTC143ES)
Q706	RN2201 (DTA143ES)
Q701-Q704	2SC1740SLN

LED assembly

D630 LED	AEL1071
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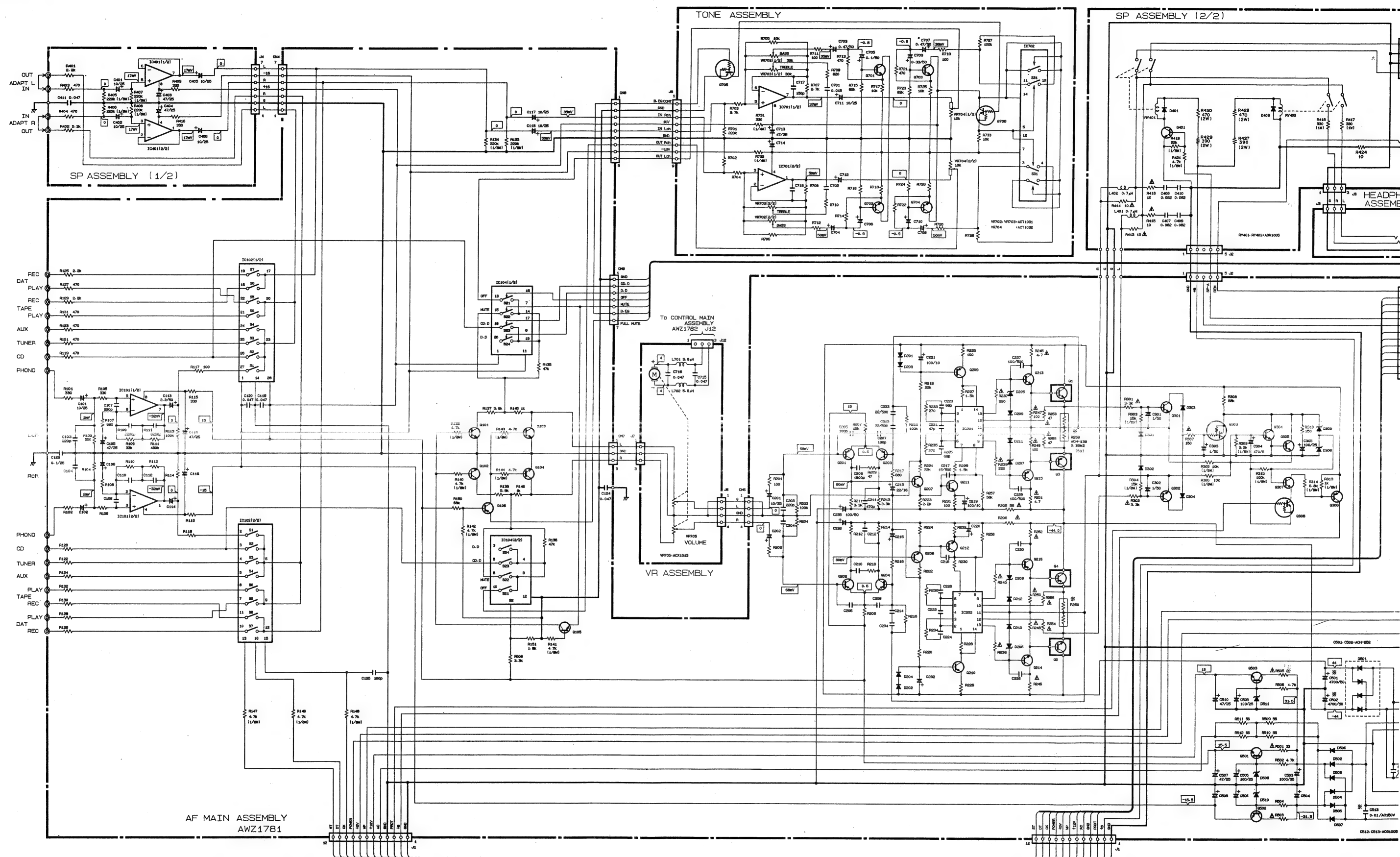
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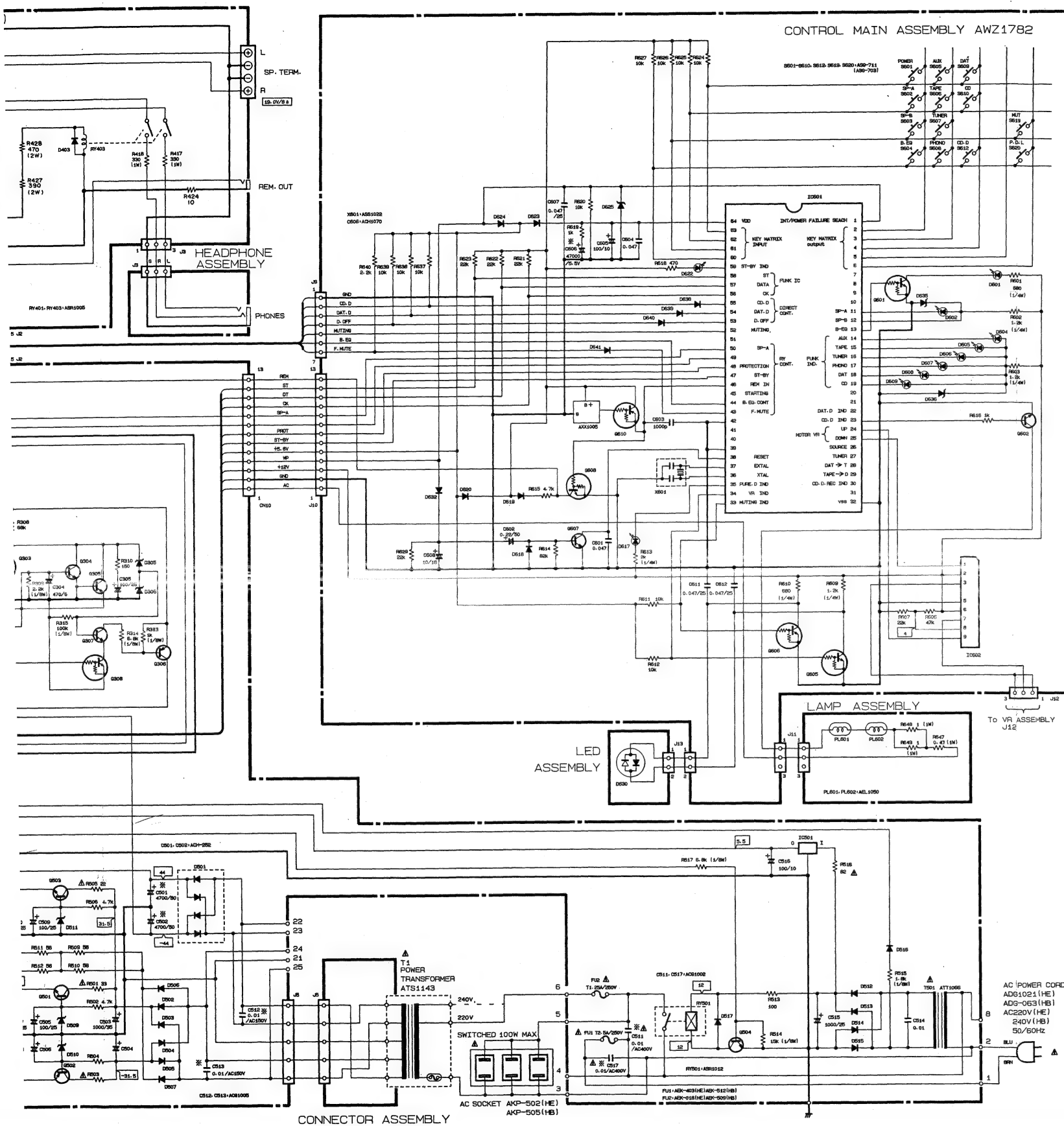
B

C

D

3.3 A—X340





AF main assembly (AWZ1781)

Q3, Q4 Transistor	2SA1263N
Q1, Q2 Transistor	2SC3180N
IC101	M5218P
IC501	M5278L56
IC201, IC202	PA0016
IC102	TC9164N
IC104	μPD6362C
Q308	RN1201 (DTC143ES)
Q303	RN2203 (DTA124ES)
Q105, Q106	2SA1048
Q215, Q216	2SA965
Q201, Q202, Q203, Q204, Q209, Q210	2SA992
Q306, Q502	2SB560
Q213, Q214	2SC2235
Q207, Q208, Q211, Q212, Q301, Q302, Q307, Q504	2SC2240
Q304, Q305	2SC2458
Q101-Q104	2SC2878
Q501	2SD438
Q503	2SD880
D207, D208	HZS48LL
D205, D206	HZS58LL
D501	RBV402
D305	RD13ESB
D511	RD13ESB1
D509, D510	RD16ESB3
D306	RD5.6ESB
D502-D507, D512-D515	S5566 (11E2)
D201-D204, D209-D212, D301-D304, D516, D517	1SS252

Control main assembly (AWZ1782)

IC601	PDG022
IC602	TA7291S
Q601, Q605, Q606, Q608	RN1201 (DTC143ES)
Q610	RN2201 (DTA143ES)
Q602	2SC2235
Q607	2SC2458
D602, D604, D605-D609, D617, D622	AEL1072
D601	AEL1073
D635, D636	RD3.0ESB
D625	RD4.7ESB2
D618-D620, D623, D624, D632, D638-D641	1SS252

- RESISTORS:**
Indicated in Ω, ¼W, ½W, ±5% tolerance unless otherwise noted k: kΩ, M: MΩ, (F): ±1%, (G): ±2%, (K): ±10% (M): ±20% tolerance
- CAPACITORS:**
Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF
Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE, CURRENT:**
V: Signal voltage at 45 W+ 45 W, 8Ω output (1kHz)
V: DC voltage (V) at no input signal
Value in () is DC voltage at rated power.
mA: DC current at no input signal
- OTHERS:**
→: Signal route.
⊙: Adjusting point.
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
*: marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCH

S601 POWER	S608 PHONO
S602 SP-A	S609 DAT
S603 SP-B	S610 CD
S604 B.EQ	S612 CD.D
S605 AUX	S619 MUT
S606 TAPE	S620 P.D.L
S607 TUNER	

SP assembly

IC401	M5218PF
Q401	2SC2240
D401, D403	1SS252

TONE assembly

IC702	LC4966
IC701	M5218PF
Q705	RN1201 (DTC143ES)
Q706	RN2201 (DTA143ES)
Q701-Q704	2SC1740SLN

LED assembly

D630 LED	AEL1071
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AF MAIN ASSEMBLY (AWZ 1781)

Q610 Q608

IC601

Q607

IC602 Q602

Q606 Q605 .

Q601

A

B

CONTROL MAIN ASSEMBLY (AWZ 1782)

SP ASSEMBLY

C

VR ASSEMBLY

LAMP ASSEMBLY

CONNECTOR ASSEMBLY

D

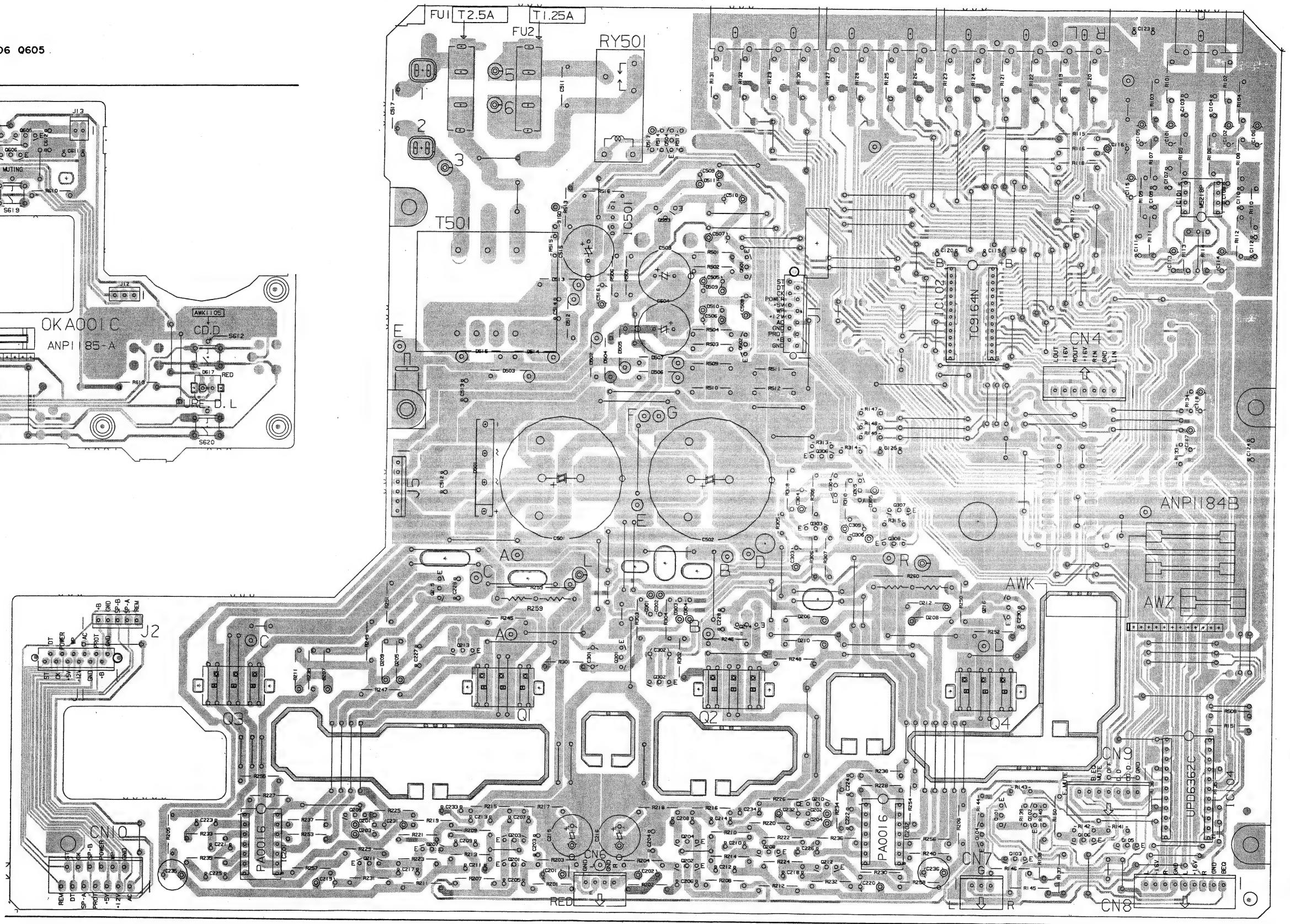
TONE ASSEMBLY

IC201 Q209 Q211

Q215 Q213
Q207 Q203 Q201

IC501 C
Q301

1



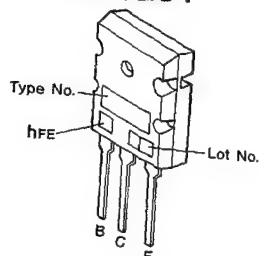
Q

CONNECTOR ASSEMBLY

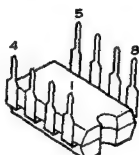
IC501 0509 0511 0507 0503 0504 0512 0513

External Appearances of Transistor and ICs

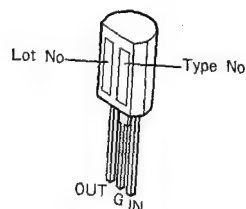
2SA1302
2SC3281



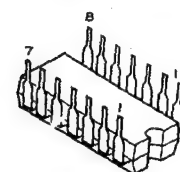
M5218P
M5218PF



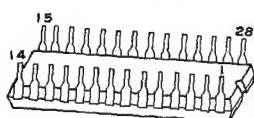
M5278L56



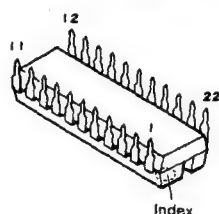
PA0016
LC4966



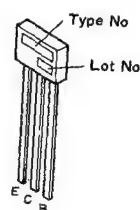
TC9163N
TC9164N



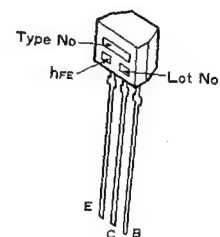
μ PD6362C



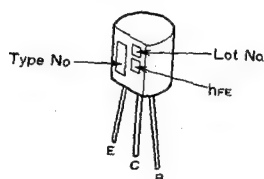
RN1201
RN2203
RN2201



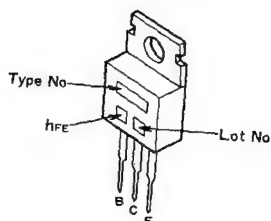
2SA1048
2SC2458



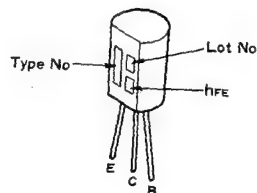
2SA1145
2SC2240
2SC2878
2SC2705



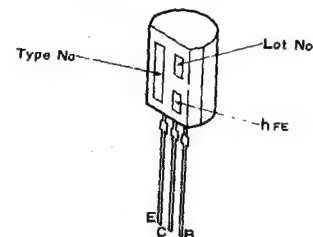
2SA968
2SD880
2SC2238



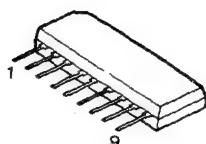
2SA992
2SC1845



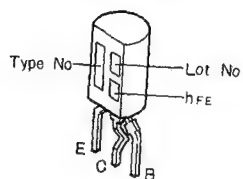
2SB560
2SD438



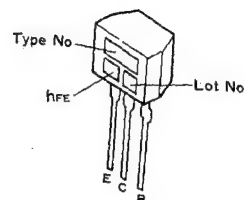
TA7291S



2SC2235
2SA965



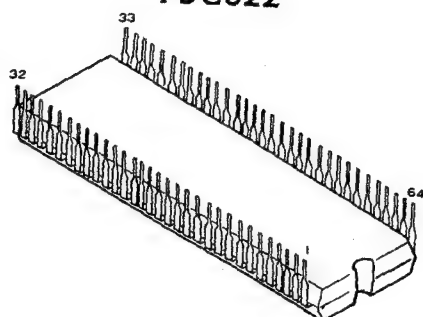
2SC1740SLN



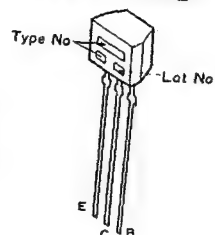
2SA1263N
2SC3180N
2SA1264N
2SC3181N



PDG022



DTA143ES
DTC143ES
DTA124ES



4. ELECTRICAL PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your parts Stock Control, the fast moving items are indicated with the marks $\star\star$ and \star .

$\star\star$ GENERALLY MOVES FASTER THAN \star

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω	56×10^1	561.....	RD1/4PS $\text{\textcircled{5}}$ $\text{\textcircled{6}}$ $\text{\textcircled{1}}$ J
47k Ω	47×10^3	473.....	RD1/4PS $\text{\textcircled{4}}$ $\text{\textcircled{7}}$ $\text{\textcircled{3}}$ J
0.5 Ω	0R5.....		RN2H $\text{\textcircled{0}}$ $\text{\textcircled{R}}$ $\text{\textcircled{5}}$ K
1 Ω	010.....		RS1P $\text{\textcircled{0}}$ $\text{\textcircled{1}}$ $\text{\textcircled{0}}$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	562×10^1	5621.....	RN1/4SR $\text{\textcircled{5}}$ $\text{\textcircled{6}}$ $\text{\textcircled{2}}$ $\text{\textcircled{1}}$ F
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4.1 A-X540

Miscellaneous Parts List

P.C.BOARD ASSEMBLIES

Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
	AF main assembly	AWZ1770	$\star\star$	IC104	μ PD6362C
	Control main assembly	AWZ1772	$\star\star$	Q308	RN1201
	SP assembly				(DTC143ES)
	HEADPHONE assembly		$\star\star$	Q303	RN2203
	TONE assembly				(DTA124ES)
	LAMP assembly		$\star\star$	Q105,Q106	2SA1048
	VR assembly		$\star\star$	Q209,Q210	2SA1145
	LED assembly		$\star\star$	Q215,Q216	2SA968

OTHERS

Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
$\star\star$	Q3,Q4 Transistor	2SA1302	$\star\star$	Q201-Q204	2SA992
$\star\star$	Q1,Q2 Transistor	2SC3281	$\star\star$	Q306,Q502	2SB560
			$\star\star$	Q207,Q208,Q301,Q302	2SC1845
			$\star\star$	Q213,Q214	2SC2238
			$\star\star$	Q307,Q504	2SC2240
Δ \star	T1 Power transformer (220V/240V)	ATS1141	$\star\star$	Q304,Q305	2SC2458
	Jumper plug	AKM1019	$\star\star$	Q211,Q212	2SC2705
Δ	AC socket (3P OUTLET)	AKP-502	$\star\star$	Q101-Q104	2SC2878
Δ $\star\star$	FU1,FU2 Fuse (T2.5A/250V)	AEK-403	$\star\star$	Q501	2SD438
Δ	AC power cord	ADG1021	$\star\star$	Q503	2SD880
	Remote control unit	AXD1053	\star	D501	D5SB20F
			\star	D207,D208	HZS5BLL
			\star	D205,D206	HZS5CLL
			\star	D305	RD13ESB
			\star	D511	RD13ESB1

AF main assembly (AWZ1770)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
$\star\star$	IC101	M5218P	\star	D509,D510	RD16ESB3
$\star\star$	IC501	M5278L56	\star	D306	RD5.6ESB
$\star\star$	IC201,IC202	PA0016	\star	D502-D507,D512-D515	S5566
$\star\star$	IC103	TC9163N			(11E2)
$\star\star$	IC102	TC9164N	\star	D201-D204,D209-D212, D301-D304,D516,D517	1SS252

RELAY

Mark	Symbol & Description	Part No.
△★★	RY501 Relay	ASR-516

TRANSFORMER

Mark	Symbol & Description	Part No.
△★	T501 Power transformer	ATT1066

CAPACITORS

Mark	Symbol & Description	Part No.
△	C511 Power capacitor (0.01/AC400V)	ACG1002
	C512,C513 Power capacitors (0.01/AC150V)	ACG1005
	C501,C502 (8200/71)	ACH1074
	C227-C230	CCCSL101K500
△	C517 Power capacitor (0.01/AC400V)	ACG1003
	C217,C218	CCCSL150K500
	C213,C214,C233,C234	CCCSL220K500
	C103,C104,C107,C108,C203, C204	CKMYB221K50
	C221,C222	CCCSL470J50
	C223-C226	CCCSL680J50
	C125,C205-C208	CCMSL101J50
	C301,C302	CEANP010M50
	C303	CEAS010M50
	C101,C102,C117,C118	CEAS100M25
	C305,C509,C516	CEAS101M25
	C515	CEAS102M25
	C503,C504	CEAS102M35
	C113,C114	CEAS2R2M50
	C105,C106,C115,C116,C510	CEAS470M25
	C304	CEAS471M6
	C235,C236	CEXA470M63
	C201,C202	CEYA100M25
	C215,C216,C231,C232,C505, C506	CEYA101M25
	C507,C508	CEYA470M25
	C514	CKCYB103K50
	C209,C210	CKCYB182K50
	C211,C212	CKCYB471K50
	C119-C122,C124	CKCYF473Z50
	C123	CKCYX104M25
	C109,C110	CQMA222J50
	C111,C112	CQMA822J50
	C219,C220	CEYA101M16

RESISTORS

Mark	Symbol & Description	Part No.
△	R259,R260 (0.33×2/5W)	ACN-139
	R201,R202,R215-R218	RDR1/4PM□□□J
	R205,R206,R516	RD1/4PMFL□□□J
△	R247-R250,R307,R237-R240, R301,R302,R253-R256	RD1/4PMFL□□□J

Mark	Symbol & Description	Part No.
	R313,R303-R306,R315,R514, R515,R309,R133,R134,R314, R139-R144,R147-R149,R517	RD1/8PM□□□J
△	R505,R501,R503,R245,R246, R251,R252	RFA1/4PS□□□J

Other resistors	RD1/4PM□□□J
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OTHERS

Mark	Symbol & Description	Part No.
	4P Pin jack (TAPE)	AKB1007
	4P Pin jack (DAT)	AKB1051
	2P Pin jack (PHONO)	AKB1052
	6P Pin jack (CD, TUNER, AUX)	AKB1053
	Transistor socket	AKH-017

Control main assembly (AWZ1772)
SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC601	PDG022
★★	IC602	TA7291S
★★	Q601,Q605,Q606,Q608	RN1201 (DTC143ES)
★★	Q609-Q611	RN2201 (DTA143ES)
★★	Q602,Q603	2SC2235
★★	Q607,Q612-Q614,Q604	2SC2458
★	D614-D616	AEL1053
★	D602-D613,D617,D622	AEL1072
★	D601	AEL1073
★	D635,D636	RD3.0ESB
★	D625	RD4.7ESB2
★	D618-D621,D623,D624, D626-D629,D631-D634, D637-D641	1SS252

SWITCHES

Mark	Symbol & Description	Part No.
★★	S601-S620 Tact switch (POWER, SP-A, SP-B, BASS EQ, AUX, TAPE, TUNER, PHONO, DAT, CD, DAT D, CD D, SOURCE, TUNER, DAT ▶ TAPE, TAPE ▶ DAT, OFF, CD D REC, MUTING, PURE.D.L)	ASG-711 (ASG-703)

CAPACITORS

Mark	Symbol & Description	Part No.
	C606 (47000μF/5.5V)	ACH1037
	C602	CEJAR22M50
	C609,C608	CEJA100M16
	C605	CEJA101M10

Mark	Symbol & Description	Part No.
	C610	CEJA4R7M50
	C603	CKDYB102K50
	C601,C604	CKDYF473Z50
	C607,C611,C612	CKDYX473M25

RESISTORS

Mark	Symbol & Description	Part No.
	R601 - R604, R609, R613, R610	RD1/4PM□□□J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
★	X601 Ceramic resonator (4.19MHz) Remote control sensor unit	ASS1022 AXX1005

SP assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC401	M5218PF
★★	Q401, Q402	2SC2235
★	D401 - D403	1SS252

RELAIIES

Mark	Symbol & Description	Part No.
★★	RY401, RY402 Relay	ASR - 112
★★	RY403 Relay	ASR1005

COILS

Mark	Symbol & Description	Part No.
	L401, L402 AF choke coil (0.7μF)	ATH1011

CAPACITORS

Mark	Symbol & Description	Part No.
	C401, C402, C405, C406	CEAS100M25
	C403, C404	CEAS470M25
	C407 - C410	CFTXA823J50
	C411	CKCYF473Z50

RESISTORS

Mark	Symbol & Description	Part No.
⚠	R415, R416	RD1/4PMFL100J
⚠	R413, R414	RD1/4PMF100J
	R401 - R404, R409, R410, R424	RD1/4PM□□□J
	R427, R429	RS2PMF681J
	R428, R430	RS2PMF821J
	R417, R418	RS2LMF331J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	4P Pin jack (ADAPTOR)	AKB1033
	8P Speaker terminal (SPEAKERS)	AKE - 111
	Mini jack (CONTROL)	AKN - 207

HEADPHONE assembly

RESISTORS

Mark	Symbol & Description	Part No.
	R425, R426	RS1PMF122J

OTHERS

Mark	Symbol & Description	Part No.
	Headphone jack (PHONES)	AKN1002

TONE assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC702	LC4966
★★	IC701	M5218PF
★★	Q705	RN1201 (DTC143ES)
★★	Q706	RN2201 (DTA143ES)
★★	Q701 - Q704	2SC1740SLN

CAPACITORS

Mark	Symbol & Description	Part No.
	C709, C710	CEASR33M50
	C703, C704	CEASR47M50
	C705, C706	CEAS0R1M50
	C707, C708	CEAS010M50
	C711, C712	CEAS100M25
	C713, C714	CEAS470M25
	C717, C718	CKMYB151K50
	C701, C702	CQMA153K50

RESISTORS

Mark	Symbol & Description	Part No.
★	VR702, VR703 Variable resistor (30k × 2)	ACT1031
★	VR704 Variable resistor (10k × 2)	ACT1032
★	VR701 Variable resistor (5k × 2)	ACT1033
	R731, R732	RD1/4PM331J
	Other resistors	RD1/8PM□□□J

LAMP assembly
RESISTORS

Mark	Symbol & Description	Part No.
	R647,R650	RS1PMFR47J
	R648,R649,R651,R652	RS1PMF010J

OTHERS

Mark	Symbol & Description	Part No.
★★	PL601 — PL604 Pilot lamp Lamp box	AEL1050 AMR1342

VR assembly
COILS

Mark	Symbol & Description	Part No.
	L701,L702 Axial inductor (5.6μH)	LAU5R6K

CAPACITORS

Mark	Symbol & Description	Part No.
	C715,C716	CKCYF473Z50

RESISTOR

Mark	Symbol & Description	Part No.
★	VR705 Variable resistor (100k × 2)	ACX1012

LED assembly
SEMICONDUCTOR

Mark	Symbol & Description	Part No.
★	D630 LED	AEL1071

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**4.2 A — X440**
**Miscellaneous Parts List**
**P.C.BOARD ASSEMBLIES**

| Mark | Symbol & Description  | Part No. |
|------|-----------------------|----------|
|      | AF main assembly      | AWZ1777  |
|      | Control main assembly | AWZ1779  |
|      | SP assembly           |          |
|      | HEADPHONE assembly    |          |
|      | CONNECTOR assembly    |          |
|      | TONE assembly         |          |
|      | LAMP assembly         |          |
|      | VR assembly           |          |
|      | LED assembly          |          |

**OTHERS**

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★   | Q3,Q4 Transistor     | 2SA1264N |
| ★★   | Q1,Q2 Transistor     | 2SC3181N |

| Mark | Symbol & Description                 | Part No.           |
|------|--------------------------------------|--------------------|
| △ ★  | T1 Power transformer (220V/240V)     | ATS1142            |
| △    | AC socket (3P OUTLET)                | AKP-502            |
| △★★  | FU2 Fuse (T2A/250V)                  | AEK-017            |
| △★★  | FU1 Fuse (T2.5A/250V)                | AEK-403            |
| △    | AC power cord<br>Remote control unit | ADG1021<br>AXD1053 |

**AF main assembly (AWZ1777)**
**SEMICONDUCTORS**

| Mark | Symbol & Description                        | Part No.             |
|------|---------------------------------------------|----------------------|
| ★★   | IC101                                       | M5218P               |
| ★★   | IC501                                       | M5278L56             |
| ★★   | IC201,IC202                                 | PA0016               |
| ★★   | IC103                                       | TC9163N              |
| ★★   | IC102                                       | TC9164N              |
| ★★   | IC104                                       | μPD6362C             |
| ★★   | Q308                                        | RN1201<br>(DTC143ES) |
| ★★   | Q303                                        | RN2203<br>(DTA124ES) |
| ★★   | Q105,Q106                                   | 2SA1048              |
| ★★   | Q215,Q216                                   | 2SA965               |
| ★★   | Q201—Q204,Q209, Q210                        | 2SA992               |
| ★★   | Q306,Q502                                   | 2SB560               |
| ★★   | Q213,Q214                                   | 2SC2235              |
| ★★   | Q207,Q208,Q211,Q212,Q301,<br>Q302,Q307,Q504 | 2SC2240              |
| ★★   | Q304,Q305                                   | 2SC2458              |
| ★★   | Q101—Q104                                   | 2SC2878              |
| ★★   | Q501                                        | 2SD438               |
| ★★   | Q503                                        | 2SD880               |
| ★    | D207,D208                                   | HZS4BLL              |
| ★    | D205,D206                                   | HZS5BLL              |
| ★    | D501                                        | RBV402               |
| ★    | D305                                        | RD13ESB              |
| ★    | D511                                        | RD13ESB1             |
| ★    | D509,D510                                   | RD16ESB3             |
| ★    | D306                                        | RD5.6ESB             |
| ★    | D502—D507,D512—D515                         | S5566<br>(11E2)      |
| ★    | D201—D204,D209—D212,<br>D301—D304,D516,D517 | 1SS252               |

**RELAY**

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| △★★  | RY501 Relay          | ASR1012  |

**TRANSFORMER**

| Mark | Symbol & Description   | Part No. |
|------|------------------------|----------|
| △ ★  | T501 Power transformer | ATT1066  |

## CAPACITORS

| Mark | Symbol & Description                         | Part No.     |
|------|----------------------------------------------|--------------|
| ⚠    | C511, C517 Power capacitors<br>(0.01/AC400V) | ACG1002      |
|      | C512, C513 Power capacitors<br>(0.01/AC150V) | ACG1005      |
|      | C501, C502 (5600/56)                         | ACH1031      |
|      | C227-C230                                    | CCCSL101K500 |
|      | C217, C218                                   | CCCSL150K500 |
|      | C213, C214, C233, C234                       | CCCSL220K500 |
|      | C103, C104, C107, C108, C203,<br>C204        | CKMYB221K50  |
|      | C221, C222                                   | CCCSL470J50  |
|      | C223-C226                                    | CCCSL680J50  |
|      | C125, C205-C208                              | CCMSL101J50  |
|      | C301, C302                                   | CEANP010M50  |
|      | C303                                         | CEAS010M50   |
|      | C101, C102, C117, C118                       | CEAS100M25   |
|      | C516, C219, C220, C231, C232                 | CEAS101M10   |
|      | C305, C505, C506, C509                       | CEAS101M25   |
|      | C515                                         | CEAS102M25   |
|      | C503, C504                                   | CEAS102M35   |
|      | C113, C114                                   | CEAS2R2M50   |
|      | C105, C106, C115, C116, C507,<br>C508, C510  | CEAS470M25   |
|      | C304                                         | CEAS471M6    |
|      | C235, C236                                   | CEXA470M63   |
|      | C201, C202                                   | CEYA100M25   |
|      | C215, C216                                   | CEYA330M16   |
|      | C514                                         | CKCYB103K50  |
|      | C209, C210                                   | CKCYB182K50  |
|      | C109, C110                                   | CKCYB222K50  |
|      | C211, C212                                   | CKCYB471K50  |
|      | C111, C112                                   | CKCYB822K50  |
|      | C119-C122, C124                              | CKCYF473Z50  |
|      | C123                                         | CKCYX104M25  |

## RESISTORS

| Mark | Symbol & Description                                                                         | Part No.     |
|------|----------------------------------------------------------------------------------------------|--------------|
|      | R259, R260 (0.33 × 2/5W)                                                                     | ACN-139      |
| ⚠    | R201, R202                                                                                   | RDR1/4PM101J |
|      | R205, R206, R516, R247-R250,<br>R307, R237-R240, R301, R302,<br>R253-R256                    | RD1/4PMF□□□J |
|      | R313, R303-R306, R315, R514,<br>R515, R309, R133, R134, R139-<br>R144, R147-R149, R314, R517 | RD1/8PM□□□J  |
| ⚠    | R505, R501, R503, R245, R246,<br>R251, R252                                                  | RFA1/4PS□□□J |
|      | Other resistors                                                                              | RD1/4PM□□□J  |

## OTHERS

| Mark | Symbol & Description         | Part No. |
|------|------------------------------|----------|
|      | 4P Pin jack (DAT, TAPE)      | AKB1007  |
|      | 6P Pin jack (CD, TUNER, AUX) | AKB1024  |
|      | 2P Pin jack (PHONO)          | AKB1039  |

## Control main assembly (AWZ1779)

### SEMICONDUCTORS

| Mark | Symbol & Description                      | Part No.             |
|------|-------------------------------------------|----------------------|
| ★★   | IC601                                     | PDG022               |
| ★★   | IC602                                     | TA7291S              |
| ★★   | Q601, Q605, Q606, Q608                    | RN1201<br>(DTC143ES) |
| ★★   | Q610                                      | RN2201<br>(DTA143ES) |
| ★★   | Q602, Q603                                | 2SC2235              |
| ★★   | Q607                                      | 2SC2458              |
| ★    | D614-D616                                 | AEL1053              |
| ★    | D602-D609, D617, D622                     | AEL1072              |
| ★    | D601                                      | AEL1073              |
| ★    | D635, D636                                | RD3.0ESB             |
| ★    | D625                                      | RD4.7ESB2            |
| ★    | D618-D620, D623, D624, D632,<br>D638-D641 | 1SS252               |

### SWITCHES

| Mark | Symbol & Description                                                                                                                                    | Part No.             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| ★★   | S601-S612, S618-S620<br>Tact switch (POWER, SP-A,<br>SP-B, BASS EQ, AUX, TAPE,<br>TUNER, PHONO, DAT, CD, DAT.D,<br>CD.D, CD.D REC, MUTING,<br>PURE.D.L) | ASG-711<br>(ASG-703) |

### CAPACITORS

| Mark | Symbol & Description | Part No.    |
|------|----------------------|-------------|
|      | C606 (47000μF/5.5V)  | ACH1070     |
|      | C602                 | CEJAR22M50  |
|      | C608                 | CEJA100M16  |
|      | C605                 | CEJA101M10  |
|      | C603                 | CKDYB102K50 |
|      | C601, C604           | CKDYF473Z50 |
|      | C607, C611, C612     | CKDYX473M25 |

### RESISTORS

| Mark | Symbol & Description        | Part No.    |
|------|-----------------------------|-------------|
|      | R601-R603, R609, R610, R613 | RD1/4PM□□□J |
|      | Other resistors             | RD1/8PM□□□J |

### OTHERS

| Mark | Symbol & Description                | Part No. |
|------|-------------------------------------|----------|
| ★    | X601 Ceramic resonator<br>(4.19MHz) | ASS1022  |
|      | Remote control sender unit          | AXX1005  |

### SP assembly SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★   | IC401                | M5218PF  |
| ★★   | Q401,Q402            | 2SC2240  |
| ★    | D401-D403            | 1SS252   |

### RELAI ES

| Mark | Symbol & Description    | Part No. |
|------|-------------------------|----------|
| ★★   | RY401,RY402,RY403 Relay | ASR1005  |

### COILS

| Mark | Symbol & Description            | Part No. |
|------|---------------------------------|----------|
|      | L401,L402 AF choke coil (0.7μH) | ATH1004  |

### CAPACITORS

| Mark | Symbol & Description | Part No.    |
|------|----------------------|-------------|
|      | C401,C402,C405,C406  | CEAS100M25  |
|      | C403,C404            | CEAS470M25  |
|      | C411                 | CKCYF473Z50 |
|      | C407-C410            | CFTXA823K50 |

### RESISTORS

| Mark | Symbol & Description     | Part No.      |
|------|--------------------------|---------------|
| △    | R415,R416                | RD1/4PMFL100J |
| △    | R413,R414                | RD1/4PMF100J  |
|      | R401-R404,R409,R410,R424 | RD1/4PM□□□J   |
|      | R417,R418                | RS1LMF□□□J    |
|      | R427,R429                | RS2PMF471J    |
|      | R428,R430                | RS2PMF681J    |
|      | Other resistors          | RD1/8PM□□□J   |

### OTHERS

| Mark | Symbol & Description           | Part No. |
|------|--------------------------------|----------|
|      | 4P Pin jack (ADAPTOR)          | AKB1033  |
|      | 8P Speaker terminal (SPEAKERS) | AKE-111  |
|      | Mini jack (CONTROL)            | AKN-207  |

### HEADPHONE assembly

#### OTHER

| Mark | Symbol & Description    | Part No. |
|------|-------------------------|----------|
|      | Headphone jack (PHONES) | AKN1002  |

### CONNECTOR assembly

No parts are supplied with the CONNECTOR assembly.

### TONE assembly

Refer to A-X540.

### LAMP assembly

Refer to A-X540.

### VR assembly

#### COILS

| Mark | Symbol & Description             | Part No. |
|------|----------------------------------|----------|
|      | L701,L702 Axial inductor (5.6μH) | LAU5R6K  |

#### CAPACITORS

| Mark | Symbol & Description | Part No.    |
|------|----------------------|-------------|
|      | C715,C716            | CKCYF473Z50 |

#### RESISTOR

| Mark | Symbol & Description             | Part No. |
|------|----------------------------------|----------|
| ★    | VR705 Variable resistor (100k×2) | ACX1013  |

### LED assembly

Refer to A-X540.

## 4.3 A-X340

### Miscellaneous Parts List

#### P.C.BOARD ASSEMBLIES

| Mark | Symbol & Description  | Part No. |
|------|-----------------------|----------|
|      | AF main assembly      | AWZ1781  |
|      | Control main assembly | AWZ1782  |
|      | SP assembly           |          |
|      | HEADPHONE assembly    |          |
|      | CONNECTOR assembly    |          |
|      | TONE assembly         |          |
|      | LAMP assembly         |          |
|      | VR assembly           |          |
|      | LED assembly          |          |

#### OTHERS

| Mark | Symbol & Description             | Part No. |
|------|----------------------------------|----------|
| ★★   | Q3,Q4 Transistor                 | 2SA1263N |
| ★★   | Q1,Q2 Transistor                 | 2SC3180N |
| △ ★  | T1 Power transformer (220V/240V) | ATS1143  |
| △    | AC socket (3P OUTLET)            | AKP-502  |
| △★★  | FU2 Fuse (T1.25A/250V)           | AEK-018  |
| △★★  | FU1 Fuse (T2.5A/250V)            | AEK-403  |
| △    | AC Power cord                    | ADG-063  |
|      | Remote control unit              | AXD1052  |

## AF main assembly (AWZ1781)

### SEMICONDUCTORS

| Mark | Symbol & Description                        | Part No.             |
|------|---------------------------------------------|----------------------|
| ★★   | IC101                                       | M5218P               |
| ★★   | IC501                                       | M5278L56             |
| ★★   | IC201,IC202                                 | PA0016               |
| ★★   | IC102                                       | TC9164N              |
| ★★   | IC104                                       | μPD6362C             |
| ★★   | Q308                                        | RN1201<br>(DTC143ES) |
| ★★   | Q303                                        | RN2203<br>(DTA124ES) |
| ★★   | Q105,Q106                                   | 2SA1048              |
| ★★   | Q215,Q216                                   | 2SA965               |
| ★★   | Q201,Q202,Q203,Q204,Q209,<br>Q210           | 2SA992               |
| ★★   | Q306,Q502                                   | 2SB560               |
| ★★   | Q213,Q214                                   | 2SC2235              |
| ★★   | Q207,Q208,Q211,Q212,Q301,<br>Q302,Q307,Q504 | 2SC2240              |
| ★★   | Q304,Q305                                   | 2SC2458              |
| ★★   | Q101-Q104                                   | 2SC2878              |
| ★★   | Q501                                        | 2SD438               |
| ★★   | Q503                                        | 2SD880               |
| ★    | D207,D208                                   | HZS4BLL              |
| ★    | D205,D206                                   | HZS5BLL              |
| ★    | D501                                        | RBV402               |
| ★    | D305                                        | RD13ESB              |
| ★    | D511                                        | RD13ESB1             |
| ★    | D509,D510                                   | RD16ESB3             |
| ★    | D306                                        | RD5.6ESB             |
| ★    | D502-D507,D512-D515                         | S5566<br>(11E2)      |
| ★    | D201-D204,D209-D212,<br>D301-D304,D516,D517 | 1SS252               |

### RELAY

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| △★★  | RY501 Relay          | ASR1012  |

### TRANSFORMER

| Mark | Symbol & Description   | Part No. |
|------|------------------------|----------|
| △ ★  | T501 Power transformer | ATT1066  |

### CAPACITORS

| Mark | Symbol & Description                        | Part No.     |
|------|---------------------------------------------|--------------|
| △    | C511,C517 Power capacitors<br>(0.01/AC400V) | ACG1002      |
|      | C512,C513 Power capacitors<br>(0.01/AC150V) | ACG1005      |
|      | C501,C502 (4700/50)                         | ACH-252      |
|      | C227-C230                                   | CCCSL101K500 |
|      | C217,C218                                   | CCCSL150K500 |
|      | C213,C214,C233,C234                         | CCCSL220K500 |
|      | C103,C104,C107,C108,C203,<br>C204           | CKMYB221K50  |

| Mark | Symbol & Description                   | Part No.    |
|------|----------------------------------------|-------------|
|      | C221,C222                              | CCCSL470J50 |
|      | C223-C226                              | CCCSL680J50 |
|      | C125,C205-C208                         | CCMSL101J50 |
|      | C301,C302                              | CEANP010M50 |
|      | C303                                   | CEAS010M50  |
|      | C101,C102,C117,C118                    | CEAS100M25  |
|      | C516,C219,C220,C231,C232               | CEAS101M10  |
|      | C505,C506,C509,C305                    | CEAS101M25  |
|      | C235,C236                              | CEAS101M50  |
|      | C515                                   | CEAS102M25  |
|      | C503,C504                              | CEAS102M35  |
|      | C113,C114                              | CEAS2R2M50  |
|      | C105,C106,C115,C116,C507,<br>C508,C510 | CEAS470M25  |
|      | C304                                   | CEAS471M6   |
|      | C215,C216                              | CEYA220M16  |
|      | C201,C202                              | CEYA100M25  |
|      | C514                                   | CKCYB103K50 |
|      | C209,C210                              | CKCYB182K50 |
|      | C109,C110                              | CKCYB222K50 |
|      | C211,C212                              | CKCYB471K50 |
|      | C111,C112                              | CKCYB822K50 |
|      | C119,C120,C124                         | CKCYF473Z50 |
|      | C123                                   | CKCYX104M25 |

### RESISTORS

| Mark | Symbol & Description                                                               | Part No.      |
|------|------------------------------------------------------------------------------------|---------------|
| △    | R259,R260 (0.33 × 2/5W)                                                            | ACN-139       |
| △    | R205,R206,R516                                                                     | RD1/4PMFL□□□J |
|      | R307,R237-R240,R301,R302,<br>R253-R256,R247-R250                                   | RD1/4PMF□□□J  |
|      | R313,R303-R306,R514,R515,<br>R309,R133,R134,R139-R144,<br>R147-R149,R314,R517,R315 | RD1/8PM□□□J   |
| △    | R505,R501,R503,R245,R246,<br>R251,R252                                             | RFA1/4PS□□□J  |

Other resistors

RD1/4PM□□□J

### OTHERS

| Mark | Symbol & Description         | Part No. |
|------|------------------------------|----------|
|      | 4P Pin jack (TAPE, DAT)      | AKB1007  |
|      | 6P Pin jack (CD, TUNER, AUX) | AKB1024  |
|      | 2P Pin jack (PHONO)          | AKB1039  |

## Control main assembly (AWZ1782)

### SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★   | IC601                | PDG022   |
| ★★   | IC602                | TA7291S  |

| Mark | Symbol & Description                   | Part No.             |
|------|----------------------------------------|----------------------|
| ★★   | Q601,Q605,Q606,Q608                    | RN1201<br>(DTC143ES) |
| ★★   | Q610                                   | RN2201<br>(DTA143ES) |
| ★★   | Q602                                   | 2SC2235              |
| ★★   | Q607                                   | 2SC2458              |
| ★    | D602,D604,D605-D609,D617,<br>D622      | AEL1072              |
| ★    | D601                                   | AEL1073              |
| ★    | D635,D636                              | RD3.0ESB             |
| ★    | D625                                   | RD4.7ESB2            |
| ★    | D618-D620,D623,D624,D632,<br>D638-D641 | 1SS252               |

### SWITCHES

| Mark | Symbol & Description                                                                                                                                        | Part No.             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| ★★   | S601-S610,S612,S619,S620<br>Tact switch (POWER, SP-A,<br>SP-B, BASS EQ, AUX, TAPE,<br>TUNER, PHONO, DAT, CD, DAT.D,<br>CD.D, CD.D REC, MUTING,<br>PURE.D.L) | ASG-711<br>(ASG-703) |

### CAPACITORS

| Mark | Symbol & Description      | Part No.    |
|------|---------------------------|-------------|
|      | C606 (47000 $\mu$ F/5.5V) | ACH1070     |
|      | C602                      | CEJAR22M50  |
|      | C608                      | CEJA100M16  |
|      | C605                      | CEJA101M10  |
|      | C603                      | CKDYB102K50 |
|      | C601,C604                 | CKDYF473Z50 |
|      | C607,C611,C612            | CKDYX473M25 |

### RESISTORS

| Mark | Symbol & Description                        | Part No.                   |
|------|---------------------------------------------|----------------------------|
|      | R601-R603,R609,R610,R613<br>Other resistors | RD1/4PM□□□J<br>RD1/8PM□□□J |

### OTHERS

| Mark | Symbol & Description                | Part No. |
|------|-------------------------------------|----------|
| ★    | X601 Ceramic resonator<br>(4.19MHz) | ASS1022  |
|      | Remote control sensor unit          | AXX1005  |

### SP assembly

### SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★   | IC401                | M5218PF  |
| ★★   | Q401                 | 2SC2240  |
| ★    | D401,D403            | 1SS252   |

### RELAIRES

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★   | RY401,RY403 Relay    | ASR1005  |

### COILS

| Mark | Symbol & Description                     | Part No. |
|------|------------------------------------------|----------|
|      | L401,L402 AF choke coil<br>(0.7 $\mu$ F) | ATH1004  |

### CAPACITORS

| Mark | Symbol & Description | Part No.    |
|------|----------------------|-------------|
|      | C401,C402,C405,C406  | CEAS100M25  |
|      | C403,C404            | CEAS470M25  |
|      | C411                 | CKCYF473Z50 |
|      | C407-C410            | CQMA823K50  |

### RESISTORS

| Mark | Symbol & Description     | Part No.      |
|------|--------------------------|---------------|
| ⚠    | R415,R416                | RD1/4PMFL100J |
| ⚠    | R413,R414                | RD1/4PMF100J  |
|      | R401-R404,R409,R410,R424 | RD1/4PM□□□J   |
|      | R417,R418                | RS1LMF□□□J    |
|      | R427,R429                | RS2PMF391J    |
|      | R428,R430                | RS2PMF471J    |
|      | Other resistors          | RD1/8PM□□□J   |

### OTHERS

| Mark | Symbol & Description           | Part No. |
|------|--------------------------------|----------|
|      | 4P Pin jack (ADAPTOR)          | AKB1033  |
|      | 4P Speaker terminal (SPEAKERS) | AKE-109  |
|      | Mini jack (CONTROL)            | AKN-207  |

### HEADPHONE assembly

Refer to A-X440.

### CONNECTOR assembly

Refer to A-X440.

### TONE assembly

### SEMICONDUCTORS



| Mark | Symbol & Description | Part No.             |
|------|----------------------|----------------------|
| ★★   | IC702                | LC4966               |
| ★★   | IC701                | M5218PF              |
| ★★   | Q705                 | RN1201<br>(DTC143ES) |
| ★★   | Q706                 | RN2201<br>(DTA143ES) |
| ★★   | Q701-Q704            | 2SC1740SLN           |





### CAPACITORS




| Mark | Symbol & Description | Part No.   |
|------|----------------------|------------|
|      | C709,C710            | CEASR33M50 |

## 6. IC INFORMATION

### MICRO COMPUTER (PDG022)

| Terminal No. | Terminal name | I/O | Condition                                | Terminal status                                                                     | Remarks                                                                                                                                                                                               |              |    |    |      |  |  |        |   |   |          |   |   |
|--------------|---------------|-----|------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----|----|------|--|--|--------|---|---|----------|---|---|
| 1            | WP            | I   | Power supply "ON"                        |  | If the input frequency is not 50/60Hz the mode will be switched to backup mode.                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 2            | PA0           | O   | For A-X540,when control is performed.    |  | Key matrix output                                                                                                                                                                                     |              |    |    |      |  |  |        |   |   |          |   |   |
| 3            | PA1           |     |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 4            | PA2           |     |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 5            | PA3           |     |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 6            | PB0           | O   |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 7            | PB1           | O   |                                          |                                                                                     | Non used                                                                                                                                                                                              |              |    |    |      |  |  |        |   |   |          |   |   |
| 8            | PB2           |     |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 9            | PB3           |     |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 10           | PE0           |     |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 11           | SP-A          | O   | SP selector...SP-A                       | L                                                                                   | SP-A IND illuminates                                                                                                                                                                                  |              |    |    |      |  |  |        |   |   |          |   |   |
| 12           | SP-B          | O   | SP selector...SP-B                       | L                                                                                   | SP-B IND illuminates                                                                                                                                                                                  |              |    |    |      |  |  |        |   |   |          |   |   |
| 13           | B-EQ          | O   | BASS EQ "ON"                             | H                                                                                   | BASS EQ IND illuminates                                                                                                                                                                               |              |    |    |      |  |  |        |   |   |          |   |   |
| 14           | AUX           | O   | When FUNCTION SEL. set at each position. | L                                                                                   | AUX IND illuminates                                                                                                                                                                                   |              |    |    |      |  |  |        |   |   |          |   |   |
| 15           | TAPE          | O   |                                          | L                                                                                   | TAPE IND illuminates                                                                                                                                                                                  |              |    |    |      |  |  |        |   |   |          |   |   |
| 16           | TUNER         | O   |                                          | L                                                                                   | TUNER IND illuminates                                                                                                                                                                                 |              |    |    |      |  |  |        |   |   |          |   |   |
| 17           | PHONO         | O   |                                          | L                                                                                   | PHONO IND illuminates                                                                                                                                                                                 |              |    |    |      |  |  |        |   |   |          |   |   |
| 18           | DAT           | O   |                                          | L                                                                                   | DAT IND illuminates                                                                                                                                                                                   |              |    |    |      |  |  |        |   |   |          |   |   |
| 19           | CD            | O   |                                          | L                                                                                   | CD IND illuminates                                                                                                                                                                                    |              |    |    |      |  |  |        |   |   |          |   |   |
| 20           | PC2           | O   | .....                                    | .....                                                                               | Non used                                                                                                                                                                                              |              |    |    |      |  |  |        |   |   |          |   |   |
| 21           | PC3           | O   |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 22           | DAT.D         | O   | DAT DIRECT "ON"                          | H                                                                                   | DAT DIRECT IND illuminates                                                                                                                                                                            |              |    |    |      |  |  |        |   |   |          |   |   |
| 23           | CD.D          | O   | CD DIRECT "ON"                           | H                                                                                   | CD DIRECT IND illuminates                                                                                                                                                                             |              |    |    |      |  |  |        |   |   |          |   |   |
| 24           | UP            | O   | VOLUME CONTROL                           |                                                                                     | <table><tr><td>Terminal No.</td><td>24</td><td>25</td></tr><tr><td>MODE</td><td></td><td></td></tr><tr><td>VOL.UP</td><td>H</td><td>L</td></tr><tr><td>VOL.DOWN</td><td>L</td><td>H</td></tr></table> | Terminal No. | 24 | 25 | MODE |  |  | VOL.UP | H | L | VOL.DOWN | L | H |
| Terminal No. | 24            | 25  |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| MODE         |               |     |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| VOL.UP       | H             | L   |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| VOL.DOWN     | L             | H   |                                          |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 25           | DOWN          | O   | UP/DOWN                                  |                                                                                     |                                                                                                                                                                                                       |              |    |    |      |  |  |        |   |   |          |   |   |
| 26           | SOURCE        | O   | When REC SEL. set at each position.      | L                                                                                   | SURCE IND illuminates                                                                                                                                                                                 |              |    |    |      |  |  |        |   |   |          |   |   |
| 27           | TUNER         | O   |                                          | L                                                                                   | TUNER IND illuminates                                                                                                                                                                                 |              |    |    |      |  |  |        |   |   |          |   |   |
| 28           | DAT→T         | O   |                                          | L                                                                                   | DAT→T IND illuminates                                                                                                                                                                                 |              |    |    |      |  |  |        |   |   |          |   |   |

| Terminal No. | Terminal name        | I/O | Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |        |        | Terminal status                                                                                                           | Remarks                                                                    |
|--------------|----------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 29           | TAPE→D               | O   | When REC SEL. set at each position.                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |        |        | L                                                                                                                         | TAPE→D IND. illuminates                                                    |
| 30           | CD.D.REC             | O   | CD DIRECT REC "ON"                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |        |        | L                                                                                                                         | CD DIRECT IND illuminates                                                  |
| 31           | NC                   | ... | .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |        |        | .....                                                                                                                     |                                                                            |
| 32           | V <sub>ss</sub>      |     | GND                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |        |        |                                                                                                                           |                                                                            |
| 33           | MUT IND              | O   | MUTING "ON"                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |        |        | H                                                                                                                         | Red IND illuminates                                                        |
| 34           | VR IND               | O   | Power supply "ON"                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |        |        | H                                                                                                                         | Yellow IND illuminates                                                     |
| 35           | PURE DIRECT          | O   | LINE DIRECT                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |        |        | L                                                                                                                         |                                                                            |
| 36           | XTAL                 | O   | Connect Crystal resonator (4.19MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |        |        |                                        | CLOCK oscillating terminal (For A-X540, oscillation is made if necessary.) |
| 37           | EXTAL                | I   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |        |        |                                                                                                                           |                                                                            |
| 38           | RESET                | I   | When inputting RESET pulse                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        |        |        |                                        |                                                                            |
| 39           | PX <sub>0</sub> /SC  | I   | .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |        |        |                                                                                                                           | GND.                                                                       |
| 40           | PX <sub>1</sub> /SOB | I   | Model<br>Teraminal NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A-X540 | A-X440 | A-X340 | By arranging the terminal levels of Pins 40 and 41 as shown in the table, the program can be adjusted to the each models. |                                                                            |
| 41           | PX <sub>2</sub> /SOA | I   | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | H      | L      | L      |                                                                                                                           |                                                                            |
|              |                      |     | 41                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | L      | H      | L      |                                                                                                                           |                                                                            |
| 42           | PX <sub>3</sub> /SI  | I   | .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |        |        | .....                                                                                                                     | GND                                                                        |
| 43           | F•MUTE               | O   | When switching over FUNCTION, CD or DAT DIRECT.                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |        |        |                                      | Prevents click noise                                                       |
|              |                      |     | During -∞ MUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |        |        | H                                                                                                                         |                                                                            |
| 44           | B.EQ CONT.           | O   | BASS EQ "ON"                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |        |        |        | H                                                                                                                         | Activates BASS EQ circuit                                                  |
| 45           | PY <sub>2</sub> /WP  | I   | The IC601 (PDG022) is a "SUPERSILENT" micro computer which oscillates the CLOCK only when necessary (only A-X540). Therefore, this terminal will oscillate the CLOCK when the respective button on the front panel is pressed or when CLOCK oscillation is required. If, for example, a "H" signal is input when pressing the button, the terminal oscillates CLOCK and will determine the function. After the necessary actions, it stops CLOCK again and enters the STOP mode. |        |        |        |                                                                                                                           |                                                                            |
| 46           | REM IN               | I   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |        |        |                                      |                                                                            |
| 47           | ST-BY                | O   | Power supply "ON"                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |        |        | H                                                                                                                         | Relay (RY501) "ON"                                                         |
| 48           | PROTECTION           | O   | Power supply "ON"                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |        |        | H                                                                                                                         | Controls relay for SP (RY401 and RY402) and relay for HP (RY403).          |
|              |                      |     | (7 seconds after power Supply ON.)                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |        |        | (L)                                                                                                                       |                                                                            |
| 49           | SP-B                 | O   | SP SELECTOR "SP-B"                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |        |        | H                                                                                                                         | Controls relay for SP-B (RY402).                                           |
| 50           | SP-A                 | O   | SP SELECTOR "SP-A"                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |        |        | H                                                                                                                         | Controls relay for SP-A (RY401).                                           |
| 51           | PMO                  | O   | .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |        |        | .....                                                                                                                     | Non used                                                                   |
| 52           | MUTING               | O   | During MUTING (-20dB)                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |        |        | H                                                                                                                         | ON/OFF of -20dB MUTING.                                                    |
| 53           | D.OFF                | O   | LINE DIRECT "OFF"                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |        |        | L                                                                                                                         |                                                                            |

| Terminal No. | Terminal name   | I/O | Condition                                         | Terminal status                                                                      | Remarks                   |
|--------------|-----------------|-----|---------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------|
| 54           | DAT.D           | O   | DAT DIRECT "ON"                                   | L                                                                                    |                           |
| 55           | CD.D            | O   | CD DIRECT "ON"                                    | L                                                                                    |                           |
| 56           | CK              | O   | When FUNCTION was changed.                        |   | For controlling FUNCTION. |
| 57           | DATA            |     |                                                   |                                                                                      |                           |
| 58           | ST              |     |                                                   |                                                                                      |                           |
| 59           | ST-BY IND       | O   | During STAND-BY.                                  | L                                                                                    | STAND-BY IND illuminates  |
| 60           | PJ <sub>0</sub> | I   | For A-X540, when the control action is performed. |   | Key matrix input          |
| 61           | PJ <sub>1</sub> |     |                                                   |                                                                                      |                           |
| 62           | PJ <sub>2</sub> |     |                                                   |                                                                                      |                           |
| 63           | PJ <sub>3</sub> |     |                                                   |                                                                                      |                           |
| 64           | V <sub>DD</sub> | ... | .....                                             |  | +5V Power supply terminal |



## 7. SPECIFICATIONS

### A-X540

#### Amplifier Section

|                                                        |                                                                      |
|--------------------------------------------------------|----------------------------------------------------------------------|
| DIN continuous power output (both channels driven)     |                                                                      |
| 1 kHz, 1%, 8Ω                                          | 100W + 100W                                                          |
| DIN music power (both channels driven)                 |                                                                      |
| 1 kHz, 1%, 8Ω                                          | 160W + 160W                                                          |
| Continuous power output (both channel driven)          |                                                                      |
| 20 Hz to 20 kHz, T.H.D 0.3%, 8Ω                        | 85W + 85W                                                            |
| IEC Continuous power output (both channel driven)      |                                                                      |
| 63 Hz to 12.5 kHz, T.H.D 0.7%, 8Ω                      | 95W + 95W                                                            |
| Total harmonic distortion *                            |                                                                      |
| 1 kHz, 50W, 8Ω                                         | 0.005% *                                                             |
| Input (sensitivity/impedance)                          |                                                                      |
| PHONO                                                  | 2.5 mV/50 kΩ                                                         |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY,                   |                                                                      |
| ADAPTOR                                                | 150 mV/50 kΩ                                                         |
| Overload level                                         |                                                                      |
| PHONO 1 kHz, 0.1%                                      | 150 mV                                                               |
| Output level                                           |                                                                      |
| TAPE REC, DAT REC, ADAPTOR OUT                         | 150 mV                                                               |
| Frequency Response                                     |                                                                      |
| PHONO                                                  | 20 Hz to 20 kHz ±0.5 dB                                              |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR           |                                                                      |
|                                                        | 10 Hz to 100 kHz $\begin{smallmatrix} +1 \\ -3 \end{smallmatrix}$ dB |
| CD (CD DIRECT ON)                                      | 10 Hz to 100 kHz $\begin{smallmatrix} +1 \\ -3 \end{smallmatrix}$ dB |
| Tone Control                                           |                                                                      |
| BASS                                                   | ±8 dB (100 Hz)                                                       |
| TREBLE                                                 | ±8 dB (10 kHz)                                                       |
| BASS EQUALIZER                                         | (MAX) +10 dB (60 Hz)                                                 |
| MUTING                                                 | -20 dB/-∞                                                            |
| Signal-to-Noise ratio (IHF short circuited, A network) |                                                                      |
| PHONO                                                  | 72 dB                                                                |
| CD (CD DIRECT ON)                                      | 102 dB                                                               |
| Signal-to-Noise ratio (DIN, continuous power/50 mW)    |                                                                      |
| PHONO                                                  | 68 dB/60 dB                                                          |
| CD (CD DIRECT ON)                                      | 82 dB/62 dB                                                          |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY,                   |                                                                      |
| ADAPTOR                                                | 82 dB/62 dB                                                          |

#### Power Supply/Miscellaneous

|                          |                                                                          |
|--------------------------|--------------------------------------------------------------------------|
| Power requirements       |                                                                          |
| European model           | AC220 V—, 50/60 Hz                                                       |
| U.K. model               | AC240 V—, 50/60 Hz                                                       |
| Other destination models | —AC 110 V/120-127 V/<br>220 V/240 V (switchable), 50/60 Hz               |
| Power consumption        |                                                                          |
| European model           | 480W                                                                     |
| U.K. model               | 480W                                                                     |
| AC outlets               |                                                                          |
| U.K. model               |                                                                          |
| switched (× 3)           | 100W                                                                     |
| Other destination models |                                                                          |
| switched (× 2)           | 100W                                                                     |
| Unswitched (× 1)         | 100W                                                                     |
| Dimensions               | 360 (W) × 349 (D) × 115 (H) mm<br>14-1/8 (W) × 13-3/4 (D) × 4-1/2 (H) in |
| Weight                   | 8.5 kg (18 lb 13 oz)                                                     |

#### Accessories

|                        |   |
|------------------------|---|
| Remote control unit    | 1 |
| Batteries AAA/RO3      | 2 |
| Operating instructions | 1 |

- Specifications and design subject to possible modification without notice due to improvements.

\* Measured by Audio Spectrum Analyzer.

# A-X440, A-X340

## A-X440

### Amplifier Section

|                                                        |                                       |
|--------------------------------------------------------|---------------------------------------|
| DIN continuous power output (both channels driven)     |                                       |
| 1 kHz, 1%, 8 $\Omega$ .....                            | 65 W + 65 W                           |
| DIN music power (both channels driven)                 |                                       |
| 1 kHz, 1%, 8 $\Omega$ .....                            | 120 W + 120 W                         |
| Continuous power output (both channels driven)         |                                       |
| 20 Hz to 20 kHz, T.H.D 0.3%, 8 $\Omega$ .....          | 55 W + 55 W                           |
| IEC continuous power output (both channels driven)     |                                       |
| 63 Hz to 12.5 kHz, T.H.D 0.7%, 8 $\Omega$ .....        | 60 W + 60 W                           |
| Total harmonic distortion                              |                                       |
| 1 kHz, 35 W, 8 $\Omega$ .....                          | 0.005% *                              |
| Input (sensitivity/impedance)                          |                                       |
| PHONO.....                                             | 2.5 mV/50 k $\Omega$                  |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR           |                                       |
| .....                                                  | 150 mV/50 k $\Omega$                  |
| Overload level                                         |                                       |
| PHONO 1 kHz, 0.1%.....                                 | 150 mV                                |
| Output (level/impedance)                               |                                       |
| TAPE REC, DAT REC, ADAPTOR OUT.....                    | 150 mV                                |
| Frequency Response                                     |                                       |
| PHONO.....                                             | 20 Hz to 20 kHz $\pm 0.5$ dB          |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR           |                                       |
| .....                                                  | 10 Hz to 70 kHz $\pm \frac{1}{3}$ dB  |
| CD (CD DIRECT ON).....                                 | 10 Hz to 100 kHz $\pm \frac{1}{3}$ dB |
| Tone Control                                           |                                       |
| BASS.....                                              | $\pm 8$ dB 100 Hz                     |
| TREBLE.....                                            | $\pm 8$ dB 10 kHz                     |
| BASS EQUALIZER.....                                    | +10 dB (60 Hz)                        |
| MUTING.....                                            | -20 dB/- $\infty$                     |
| Signal-to-Noise ratio (IHF short circuited, A network) |                                       |
| PHONO.....                                             | 72 dB                                 |
| CD (CD DIRECT ON).....                                 | 100 dB                                |
| Signal-to-Noise ratio (DIN, continuous power/50 mW)    |                                       |
| PHONO.....                                             | 68 dB/60 dB                           |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR           |                                       |
| .....                                                  | 82 dB/62 dB                           |
| CD (CD DIRECT ON).....                                 | 82 dB/62 dB                           |

### Power Supply/Miscellaneous

|                                |                                                                                                        |
|--------------------------------|--------------------------------------------------------------------------------------------------------|
| Power requirements             |                                                                                                        |
| U.K., Australian models.....   | ~ AC 240 V, 50/60 Hz                                                                                   |
| Other destination models.....  | ~ AC 110 V/120 - 127 V/<br>220 V/240 V (switchable), 50/60 Hz                                          |
| Power consumption              |                                                                                                        |
| Other destination models.....  | 390 W                                                                                                  |
| U.K., Australian models.....   | 390 W                                                                                                  |
| AC outlets                     |                                                                                                        |
| U.K. model                     |                                                                                                        |
| Switched ( $\times 3$ ).....   | 100 W                                                                                                  |
| Other destination models       |                                                                                                        |
| Switched ( $\times 2$ ).....   | 100 W                                                                                                  |
| Unswitched ( $\times 1$ )..... | 100 W                                                                                                  |
| Dimensions.....                | 360 (W) $\times$ 346 (D) $\times$ 115 (H) mm<br>14-3/16 (W) $\times$ 13-5/8 (D) $\times$ 4-9/16 (H) in |
| Weight.....                    | 6.6 kg (14 lb 9 oz)                                                                                    |

### Accessories

|                             |   |
|-----------------------------|---|
| Operating instructions..... | 1 |
| Remote control unit.....    | 1 |
| Batteries (AAA/R03).....    | 2 |

- Specifications and design subject to possible modification without notice due to improvements.
- \*Measured by Audio Spectrum Analyzer.

## A-X340

### Amplifier Section

|                                                        |                                       |
|--------------------------------------------------------|---------------------------------------|
| DIN continuous power output (both channels driven)     |                                       |
| 1 kHz, 1%, 8 $\Omega$ .....                            | 45 W + 45 W                           |
| DIN music power (both channels driven)                 |                                       |
| 1 kHz, 1%, 8 $\Omega$ .....                            | 85 W + 85 W                           |
| Continuous power output (both channels driven)         |                                       |
| 20 Hz to 20 kHz, T.H.D 0.5%, 8 $\Omega$ .....          | 30 W + 30 W                           |
| IEC continuous power output (both channels driven)     |                                       |
| 63 Hz to 12.5 kHz T.H.D 0.7%, 8 $\Omega$ .....         | 40 W + 40 W                           |
| Total harmonic distortion                              |                                       |
| 1 kHz, 25 W, 8 $\Omega$ .....                          | 0.005% *                              |
| Input (sensitivity/impedance)                          |                                       |
| PHONO.....                                             | 2.5 mV/50 k $\Omega$                  |
| TUNER, CD, AUX, TAPE PLAY, ADAPTOR.....                | 150 mV/50 k $\Omega$                  |
| Overload level                                         |                                       |
| PHONO 1 kHz, 0.1%.....                                 | 150 mV                                |
| Output                                                 |                                       |
| TAPE REC, ADAPTOR OUT.....                             | 150 mV                                |
| Frequency Response                                     |                                       |
| PHONO.....                                             | 20 Hz to 20 kHz $\pm 0.5$ dB          |
| TUNER, CD, AUX, TAPE PLAY, ADAPTOR                     |                                       |
| .....                                                  | 10 Hz to 100 kHz $\pm \frac{1}{3}$ dB |
| CD (CD DIRECT ON).....                                 | 10 Hz to 100 kHz $\pm \frac{1}{3}$ dB |
| Tone Control                                           |                                       |
| BASS.....                                              | $\pm 8$ dB (100 Hz)                   |
| TREBLE.....                                            | $\pm 8$ dB (10 kHz)                   |
| BASS EQUALIZER.....                                    | +8 dB (60 Hz)                         |
| MUTING.....                                            | -20 dB/- $\infty$                     |
| Signal-to-Noise ratio (IHF short circuited, A network) |                                       |
| PHONO.....                                             | 72 dB                                 |
| CD (CD DIRECT ON).....                                 | 100 dB                                |
| Signal-to-Noise ratio (DIN, continuous power/50 mW)    |                                       |
| PHONO.....                                             | 68 dB/60 dB                           |
| TUNER, CD, AUX, TAPE PLAY, ADAPTOR.....                | 82 dB/62 dB                           |
| CD (CD DIRECT ON).....                                 | 82 dB/62 dB                           |

### Power Supply/Miscellaneous

|                              |                                              |
|------------------------------|----------------------------------------------|
| Power requirements           |                                              |
| European model.....          | ~ AC 220 V, 50/60 Hz                         |
| U.K., Australian models..... | ~ AC 240 V, 50/60 Hz                         |
| Power consumption            |                                              |
| European model.....          | 250 W                                        |
| U.K., Australian models..... | 250 W                                        |
| AC outlets                   |                                              |
| Switched ( $\times 3$ )..... | 100 W                                        |
| Dimensions.....              | 360 (W) $\times$ 346 (D) $\times$ 115 (H) mm |
| Weight.....                  | 5.9 kg                                       |

### Accessories

|                             |   |
|-----------------------------|---|
| Operating instructions..... | 1 |
| Remote control unit.....    | 1 |
| Batteries (AAA/R03).....    | 2 |

- Specifications and design subject to possible modification without notice due to improvements.
- \*Measured by Audio Spectrum Analyzer.